Colour television **Chassis**

Service
Service
Service

GFL7D
AA

Service Manual

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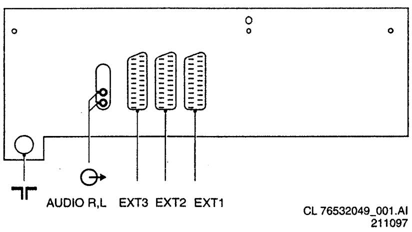
PHILIPS

1. Technical specifications

Mains Voltage;	
Auto Multi Voltage	: 90 - 276 VAC
Mains Frequency	: 50 - 60Hz (± 5)
Synchronization;	
Horizontal Pull-In Range Sub Carrier	: +200Hz and -300Hz (PAL, NTSC 4.43)
	: +200Hz and -200Hz (NTSC 3.58)
Vertical Pull-In Range	: ± 5Hz
Tuning Range (VHF + UHF + S + H) (FV916MG/PH)	: 45.25MHz - 855.25MHz
Tuning Resolution	: 62.25kHz
SNR at 60dB uV	
Antenna Input	: > 45dB
Aerial Input Impedance	: 75 ohm
Minimum Aerial Voltage	: 30uV (VHF), 40uV (UHF)
Minimum Aerial Voltage VHF/S/UHF	: 180mV
Programs	: 0 - 99
VCR Programs	: 0, 50 - 99
Terrestrial Tuner FS988	
Noise Figure	: < 98dB
Aerial Input Impedance	: 75 ohm
Minimum Aerial Voltage	: 30uV (VHF), 40uV (UHF)
Minimum Aerial Voltage VHF/S/UHF	: 180mV
Frequency Range	: 91.25MHz - 313.25MHz (Low Band)
	: 471.25MHz - 765.25MHz (High Band)

2. Connection facilities

Specification of the connectors for 48PP9103



EXT 1 (AUX): RGB+CVBS+Y/C

1	-Audio ⊖→ R ($0{,}5V_{RMS} \leq 1k\Omega$)
2	-Audio →⊖ R ($0{,}2\text{-}2V_{RMS} \geq 10k\Omega$)
3	-Audio ⊖→ L ($0{,}5V_{RMS} \leq 1k\Omega$)
4	-Audio ⊥
5	-Blue ⊥
6	-Audio →⊖ L ($0{,}2\text{-}2V_{RMS} \geq 10k\Omega$)
7	-Blue ($0{,}7V_{pp}/75\Omega$)
8	-CVBS-status →⊖ 0-2V: INT 4,5-7V: EXT 16:9 9,5-12V: EXT 4:3
9	-Green ⊥
10	--
11	-Green ($0{,}7V_{pp}/75\Omega$)
12	--
13	-Red ⊥
14	-RGB-status ⊥
15	-Red ($0{,}7V_{pp}/75\Omega$)
16	-RGB-status (0-0,4V: INT) (1-3V: EXT/75Ω)
17	-CVBS ⊥
18	-CVBS ⊥
19	-CVBS ⊖→ ($1V_{pp}/75\Omega$)
20	-CVBS →⊖ ($1V_{pp}/75\Omega$)
21	-Earthscreen

EXT2 (VCR): Y/C+CVBS+RGB

1	-Audio ⊖→ R ($0{,}5V_{RMS} \leq 1k\Omega$)
2	-Audio →⊖ R ($0{,}2\text{-}2V_{RMS} \geq 10k\Omega$)
3	-Audio ⊖→ L ($0{,}5V_{RMS} \leq 1k\Omega$)
4	-Audio ⊥
5	-Blue ⊥
6	-Audio →⊖ L ($0{,}2\text{-}2V_{RMS} \geq 10k\Omega$)
7	-Blue ($0{,}7V_{pp}/75\Omega$)
8	-CVBS-status →⊖ 0-2V: int 4,5-7V: EXT 16:9 9,5-12V: EXT 4:3
9	-Green ⊥
10	--
11	-Green ($0{,}7V_{pp}/75\Omega$)
12	--
13	-Red ⊥
14	-RGB-status ⊥
15	-Red ($0{,}7V_{pp}/75\Omega$)
16	-RGB-status (0-0,4V: INT) (1-3V: EXT/75Ω)
17	-CVBS ⊥
18	-CVBS ⊥
19	-CVBS ⊖→ ($1V_{pp}/75\Omega$)
20	-CVBS/Y ⊖→ ($1V_{pp}/75\Omega$)
21	-Earthscreen

EXT3: CVBS+RGB

1	--
2	-Audio →⊖ R ($0{,}2\text{-}2V_{RMS} \geq 10k\Omega$)
3	--
4	-Audio ⊥
5	-Blue ⊥ (Euro only)
6	-Audio →⊖ L ($0{,}2\text{-}2V_{RMS} \geq 10k\Omega$)
7	-Blue ($0{,}7V_{pp}/75\Omega$)
8	--
9	-Green →⊖
10	--
11	-Green ($0{,}7V_{pp}/75\Omega$)
12	--
13	-Red ⊥
14	-RGB-status ⊥
15	-Red ($0{,}7V_{pp}/75\Omega$)
16	--
17	-CVBS ⊥
18	-CVBS ⊥
19	--
20	-CVBS →⊖ ($1V_{pp}/75\Omega$)
21	-Earthscreen

Connection facilities

EXT3 (front)

◎ CINCH Video ⊖ 300mV$_{pp}$/75Ω
◎ CINCH Audio ⊖ L (0,5V$_{RMS}$; ≥ 10kΩ)
◎ CINCH Audio ⊖ R (0,5V$_{RMS}$; ≥ 10kΩ)

◎ 3.5mm 🔈/🎧 32-2000Ω ≥ 10mW

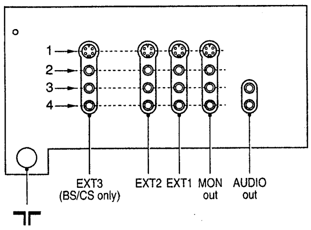
SVHS ⊜

1 -
2 -
3 - Y (1V$_{pp}$; 75Ω)
4 - C (0,3V$_{pp}$; 75Ω)

Audio out (rear)

◎ CINCH Audio ⊖→ L (0,5V$_{RMS}$; ≤ 1kΩ)
◎ CINCH Audio ⊖→ R (0,5V$_{RMS}$; ≤ 1kΩ)

Specification of the connectors for 48P977 and 54P915



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EXT1

◎	Cinch CVBS input	300mV ± 3dB
⊜	S-VHS Y input	1Vpp ± 3dB, impedance 75Ω
	S-VHS C input	300mV ± 3dB, 5Vdc ⊖ 16:9
◎	Cinch audio L, R input	0.2-2V$_{RMS}$, impedance 10kΩ

EXT2

◎	Cinch CVBS input	300mV ± 3dB
⊜	S-VHS Y input	1Vpp ± 3dB, impedance 75Ω
	S-VHS C input	300mV ± 3dB, 5Vdc ⊖ 16:9
◎	Cinch audio L, R input	0.2-2V$_{RMS}$, impedance 10kΩ

EXT3 (Japan BS/CS only)

◎	Cinch CVBS input	300mV ± 3dB
⊜	S-VHS Y input	1Vpp ± 3dB, impedance 75Ω
	S-VHS C input	300mV ± 3dB, 5Vdc ⊖ 16:9
◎	Cinch audio L,R input	0.2-2V$_{RMS}$, impedance 10kΩ

Monitor out

◎	Cinch CVBS output	300mV ± 3dB
⊜	S-VHS Y output	1Vpp ± 3dB, impedance 75Ω
	S-VHS C output	300mV ± 3dB, 5Vdc ⊖→ 16:9
◎	Cinch audio L,R output	0.2-2V$_{RMS}$, impedance 10kΩ

Audio Cinch out

Constant level or variable level selectable via menu.

◎	Cinch audio L, R output	0.2-2V$_{RMS}$, impedance 10kΩ

External speakers

L, R front	2x10 W$_{RMS}$ at 8Ω and 0.7% THD
	2x13 W$_{RMS}$ at 8Ω and 10% THD
Surround	2x3 W$_{RMS}$ at 8Ω and 0.7% THD
	2x5 W$_{RMS}$ at 8Ω and 10% THD

Front

◎	Cinch CVBS input	300mV ± 3dB
⊜	S-VHS Y input	1Vpp ± 3dB, impedance 75Ω
	S-VHS C input	300mV ± 3dB, 5Vdc ⊖ 16:9 switch over
◎	Cinch audio L,R input	0.2-2V$_{RMS}$, impedance 10kΩ
	◎ 3.5mm 🔈/🎧	≥ 10mW, impedance 32-2000Ω

3. Safety instructions, Maintenance instructions, Warnings and Notes

Safety instructions for repairs

1. Safety regulations require that during a repair:
- The set should be connected to the mains via an isolating transformer;
- Safety components, indicated by the symbol ", should be replaced by components identical to the original ones;
- When replacing the CRT, safety goggles must be worn.

2. Safety regulations require that after a repair the set must be returned in its original condition. In particular attention should be paid to the following points:
- As a strict precaution, we advise you to resolder the solder joints through which the horizontal deflection current is flowing, in particular:
  - all pins of the line output transformer (LOT);
  - fly-back capacitor(s);
  - S-correction capacitor(s);
  - line output transistor;
  - pins of the connector with wires to the deflection coil;
  - other components through which the deflection current flows.

Note:
This resoldering is advised to prevent bad connections due to metal fatigue in solder joints and is therefore only necessary for television sets older than 2 years.
- The wire trees and EHT cable should be routed correctly and fixed with the mounted cable clamps.
- The insulation of the mains lead should be checked for external damage.
- The mains lead strain relief should be checked for its function in order to avoid touching the CRT, hot components or heat sinks.
- The electrical DC resistance between the mains plug and the secondary side should be checked (only for sets which have a mains isolated power supply). This check can be done as follows:
  - unplug the mains cord and connect a wire between the two pins of the mains plug;
  - set the mains switch to the on position (keep the mains cord unplugged!);
  - measure the resistance value between the pins of the mains plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be between 4.5 MΩ and 12 MΩ;
  - switch off the TV and remove the wire between the two pins of the mains plug.
- The cabinet should be checked for defects to avoid touching of any inner parts by the customer.

Maintenance instructions

It is recommended to have a maintenance inspection carried out by a qualified service employee. The interval depends on the usage conditions:
- When the set is used under normal circumstances, for example in a living room, the recommended interval is 3 to 5 years.
- When the set is used in circumstances with higher dust, grease or moisture levels, for example in a kitchen, the recommended interval is 1 year.

The maintenance inspection contains the following actions:
- Execute the above mentioned 'general repair instruction'.
- Clean the power supply and deflection circuitry on the chassis.
- Clean the picture tube panel and the neck of the picture tube.

Warnings

1. In order to prevent damage to ICs and transistors, all high-voltage flashovers must be avoided. In order to prevent damage to the picture tube, the method shown in Fig. 3.1 should be used to discharge the picture tube. Use a high-voltage probe and a multimeter (position DC-V). Discharge until the meter reading is 0V (after approx. 30s).

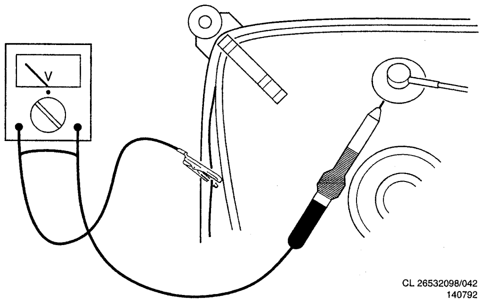

Fig. 3.1

2. **ESD**

All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the set by a wristband with resistance. Keep components and tools also at this same potential.

Available ESD protection equipment:

anti-static table mat; large 1200x650x1.25mm	4822 466 10953
anti-static table mat; small 600x650x1.25mm	4822 466 10958
anti-static wristband	4822 395 10223
connection box (3 press stud connections, 1 MΩ)	4822 320 11307
extension cable (2 m, 2 MΩ; to connect wristband to connection box)	4822 320 11305
connecting cable (3 m, 2 MΩ; to connect table mat to connection box)	4822 320 11306
earth cable (1 MΩ; to connect any product to mat or connection box)	4822 320 11308
complete kit ESD3 (combining all 6 prior products; small table mat)	4822 310 10671
wristband tester	4822 344 13999

3. Together with the deflection unit and any multipole unit, the flat square picture tubes used from an integrated unit. The deflection and the multipole units are set optimally at the factory. Adjustment of this unit during repair is therefore not recommended.

4. Be careful during measurements in the high-voltage section and on the picture tube.

5. Never replace modules or other components while the unit is switched on.

6. When making settings, use plastic rather than metal tools. This will prevent any short circuits and the danger of a circuit becoming unstable.

7. Wear safety goggles during replacement of the picture tube.

Notes

1. The direct voltages and oscillograms should be measured with regard to the tuner earth (⊥), or hot earth (⊥) as this is called.

2. The direct voltages and oscillograms shown in the diagrams are indicative and should be measured in the **Service Default Mode** (see chapter 8) with a colour bar signal and stereo sound (L:3 kHz, R:1 kHz unless stated otherwise) and picture carrier at 475.25 MHz.

3. Where necessary, the oscillograms and direct voltages are measured with (⊤) and without aerial signal (⊤). Voltages in the power supply section are measured both for normal operation (⏀) and in standby (⏻). These values are indicated by means of the appropriate symbols.

4. The picture tube PWB has printed spark gaps. Each spark gap is connected between an electrode of the picture tube and the Aquadag coating.

5. The semiconductors indicated in the circuit diagram and in the parts lists are completely interchangeable per position with the semiconductors in the unit, irrespective of the type indication on these semiconductors.

6. DOLBY SURROUND
PRO • LOGIC

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4. Mechanical instructions

All numbers found in the following text refer to the exploded view drawing (see Fig. 4.1) and apply to all models.

4.1 Mechanical disassembly

1. Loosen the 11 screws located on the sides and bottom of the Lower Center Back Cover (1). Loosen the 3 screws on the bottom of the Plastic Upper Back Cover. Remove the Lower Center Back Cover (1).
   Note: If you are only servicing a board or speaker, you do not have to remove the Plastic Upper Back Cover.
2. Loosen the 7 screws located in the Upper Center Back Cover. Lift cover up to dislodge from pegs and remove the cover.
3. Loosen the 6 screws located in the Mirror Mounting Board and remove the board.
   Note: Care should be taken **NOT** to place fingerprints or smudges on mirror.
4. Loosen the 2 screws located in the Center Shelf and remove the shelf.
5. Loosen the 2 screws located in the Plastic Light Barrier (16) and remove barrier.
6. Loosen the 6 screws located in the End Back Covers (3), 3 per cover, and remove each cover.

To remove optical assembly or individual light box assemblies

1. Separate CRT Boards from assemblies to be removed.
2. To remove the Optical Assembly, loosen the 4 screws located in the assembly and lift assembly up and out.

2a. To remove individual assemblies, loosen the 4 screws located in the assembly you wish to remove and lift assembly up and out.

To remove digital convergence board
Loosen the 3 screws located in the Digital Convergence Board Frame (7) and remove frame and board.

To remove 25W AMP board
Loosen the 2 screws located in the 25W Amp board and remove the board.

To remove large/small frame

1. Loosen the 2 screws located in the metal brackets on the Overlay Jack Panel (22) and remove panel.
2. Loosen the 2 screws located in the left and middle of the board. Loosen the 3 screws located in the right of the Large/Small Signal Frame (10/11).
3. Push brackets on side of frame and slide frame forward.

To remove TXT module
Loosen 1 screw, release tab and remove board.

To remove interface board
Pull 1 tab to left on board, pull board up and to the left.

To remove Large Signal board
Loosen 1 screw , located next to the Flyback, on the Large Signal board and pull the 3 tabs. Pull up and to the right to remove board.

To remove Small Signal board
Pull 1 tab to left on board, pull board up and to the left.

4.2 Disassembly of the optical system

Replacement of a picture tube (CRT) and/or optical system components of a Projection TV (PTV) can be easily accomplished by following general guidelines. Use care when working around the CRT and optical systems of the PTV. The PTV light path encompasses a wealth of precision optical components which includes lenses, mirrors, lenticular and fresnel screens. The PTV uses three separate CRTs representing Green, Red, and Blue outputs. Each CRT uses an independent Deflection/Convergence Yoke, Magnetic Centering Ring, coupler, C-Element lens, and output lens (A/B Lens). Each tube is mechanically fastened to a coupler, which houses fluid (glycol-type substance) used to cool the high temperatures generated by the small 7" CRTs. The fluid also provides an optical characteristic supporting the optical system of the PTV. When replacement of a CRT or optical component is required, caution must be exercised in preventing fluid spillage. The technician must carefully reassemble the CRT/optical components, insuring a proper seal of the coupling fluid. Use only factory original coupling fluid.
Do not use or add water as an alternative to the prescribed coupling fluid.

The following procedure should be used when performing repairs on the CRT/optical assemblies of the Projection TV:

Note: Upon completing repair of the CRT/optical assembly, the centering, convergence, gray scale, mechanical and electrical focus adjustments are required. If more than one assembly requires repair, it is recommended the service technician fully complete one assembly at a time using the existing assemblies as a reference for alignment of the centering and convergence.

4.3 Disassembly procedure (see Fig. 4.2)

4.3.1 *Removing a Single CRT/Lens Assembly from the Light Rack*

1. Remove AC power from the PTV.
2. Remove the upper and lower back covers (1/4" screws).
3. Remove the barrier board and the shield cover from around the lens assemblies (1/4" screws).
4. Remove the left side wing cover (as viewed from the back) to gain access to the Digital Convergence Module (1/4" screws).
5. Carefully remove the CRT Socket Board from the CRT of the CRT/optical assembly requiring service.
6. Remove the yoke plug from the Large Signal Module and the convergence yoke plug from the Digital Convergence Module of the CRT/optical assembly requiring service.
7. Remove the High Voltage Anode lead from the HV splitter block on the Large Signal Module of the CRT/optical assembly requiring service. Remove ground lug connectors from the coupler frame.
8. Remove the four 1/4" screws that secure the CRT/Lens Assembly to the light rack. These four screws are located in each corner, on the top of the coupler assembly.
   ***Caution:** Do not remove the bolts with pressure springs or the inverted Torx screws of the CRT/Lens Assembly. The removal of these components could result in fluid spillage into the PTV cabinet.*
9. Carefully remove the CRT/Lens Assembly from the PTV cabinet.

Servicing the CRT/optical assembly
The following procedures describe how to service the Delta 77/78 CRT/Optical Block used in the GFL7D chassis.
Note: Do not attempt any repairs on the CRT/Optical Block assembly without first removing the CRT coupling fluid. Removal of the delta output lens will result in spillage of the coupling fluid.
***Caution:** Coupling fluid is a poisonous solution containing a high concentration of Ethylene Glycol. Do not leave exposed fluid unattended. Prevent children or pets from coming in contact with the fluid. Clean up spills immediately.*

4.3.2 *Removing the PTV Coupling Fluid*

All repairs made to the CRT/Optical Block assembly will require the coupling fluid to be removed. The following procedure describes how to remove the PTV coupling fluid.

1. Place the CRT assembly on its side with the drain plug pointing up.
2. Remove the drain plug (1/4 turn to release).
3. Remove some of the fluid from the coupler to prevent spillage when the CRT is removed. An empty coupling fluid bottle with a cone top is recommended to lower the fluid level within the coupler. Squeeze and hold the bottle and insert the tip of the cap into the drain hole of the coupler. Loosen the grip on the bottle allowing the fluid to be pulled up into the bottle. Save the fluid.
4. Reinstall the drain plug.
5. Stand the CRT assembly up with the neck of the CRT pointing up.
6. With an awl or marking pen, outline the edges of the CRT onto the coupler.
   Note: The correct positioning of the CRT to the coupler is critical to the optimum performance of the optical system.
7. Remove the four CRT mounting bolts (with springs and spacers) and remove the mounting bracket.

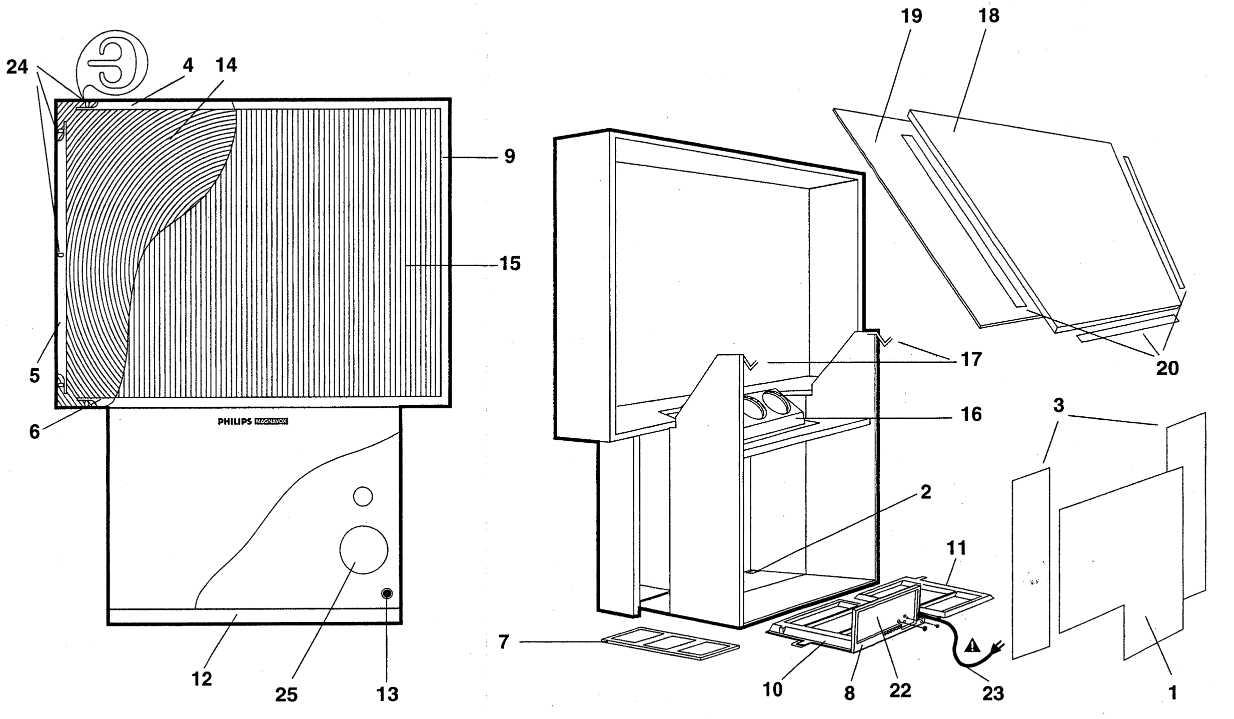

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Fig. 4.1

Mechanical instructions

8. Remove the four CRT mounting ear screws.
   Note: Some CRTs do not use the four CRT to coupler screws.
9. Gently remove any metal shavings from around the screw holes. Do not allow the metal shavings to get into the fluid.
10. Note the position of the High Voltage Anode Cap with respect to the coupler.
11. Carefully remove the CRT from the coupler. Wipe excess fluid from the faceplate of the CRT. Set the CRT aside.
12. Use an empty coupling fluid bottle to extract the remainder of the fluid from the coupler.
    Note: Complete removal of the coupling fluid is not necessary when only replacing the CRT.
13. Clean any remaining fluid from the coupler and the CRT gasket channel using absorbent tissue. Refer to the "Cleaning the Coupler, C-Element Lens and CRT Faceplate" procedure if the fluid is discolored or contaminated.
14. Make necessary repairs.

4.3.3 *Cleaning the Coupler, C-Element Lens, and CRT Faceplate*

1. Remove PTV coupling fluid as described in steps 1b through 13b above.
2. Using *denatured alcohol* on a cloth made of 100% cotton or a lens cleaning tissue, gently clean the C-Element (Fish eye) Lens, coupler and the CRT faceplate. Thoroughly clean the coupler assembly, including the expansion chamber bladder. Allow to fully dry.
   Note: Do not use soap or detergent-type substances to clean the coupler and its related assemblies. Water can be used as an alternative to denatured alcohol but the assemblies must be completely dry prior to reassembly of the coupler and the addition of the coupling fluid. A hair dryer may be used to dry the coupler and its assemblies prior to reassembly.
   ***Caution:** If contaminated fluid is discovered, complete disassembly and cleaning of the coupler and its related assemblies must be performed in order to prevent a reoccurrence.*
3. Replace the CRT and C-Element Lens Gaskets.
4. Reassemble the C-Element Lens and the Output Lens to the coupler.
5. Refer to the "Replacing the PTV Coupling Fluid" procedure upon completion of necessary repairs and cleaning of the Optical/Coupler assemblies.

4.3.4 *Replacement of the CRT*

1. Remove PTV coupling fluid as described in steps 1b through 13b above.
2. Remove the plastic protective coating (if present) from the faceplate of the replacement CRT.
3. Refer to the "Replacing the PTV Coupling Fluid" procedure to complete the CRT replacement.

4.3.5 *Repair or Replacement of the Optical/Coupler Assembly*

1. Remove PTV coupling fluid as described in steps 1b through 13b above.
2. Remove the four "Inverted Type Torx" screws which secure the Delta Output Lens to the coupler.
   An "Inverted Type Torx" socket may be ordered under part number 4835 395 17303.
3. Removal of the Delta Output Lens will allow access to the C-Element, C-Element Gasket, coupler and its assemblies.
4. Refer to the "Replacing the PTV Coupling Fluid" procedure upon completion of necessary repairs to the Optical/Coupler assemblies.

4.3.6 *Replacing the PTV Coupling Fluid*

Note: Prior to replacing the PTV coupling fluid, ensure the expansion chamber bladder is fully collapsed. This can easily be inspected by visually viewing the bladder through the small hole on the expansion chamber assembly. If the rubber of the bladder is not easily visible through the small hole, the bladder is collapsed and fluid can be added. If the rubber of the expansion chamber bladder is visible at the hole of the expansion chamber, replacement of the expansion chamber bladder will be required.

Note: The CRT coupling fluid is critical to the optical performance of the PTV. Use only part number 4835 310 57233 (3 bottle kit) or 4835 310 67004 (1 bottle) to ensure the optical integrity and performance reliability of the PTV when replacing the PTV coupling fluid.

1. Reinstall the CRT gasket into the gasket channel of the coupler. Confirm the placement of the CRT, C-Element, and vent plug gaskets.
2. Place the CRT onto the coupler with the High Voltage Anode lead positioned as marked in step 10b above.
3. Carefully position the CRT on the coupler using the outline defined in step 7b above as a reference.
4. Start the CRT mounting ear screws but do not tighten them.
5. Tighten the mounting ear screws in a star pattern (similar to tightening lug nuts on a car's wheel). Make sure the CRT does not shift position from the outline used as a reference.
   ***Caution:** Do not over tighten the CRT ear screws.*
   Note: Some assemblies will not have the CRT mounting ear screws.
6. Install the CRT mounting bracket and start the four CRT mounting bracket bolts with springs.
7. Tighten the bolts in a star pattern.
8. Place the CRT assembly on its side with the drain plug pointing up.
9. Remove the drain plug (1/4 turn to release).
10. Using the PTV coupling fluid bottle with the cone top, refill the coupler with fluid through the drain access hole. Completely fill the coupler chamber so the fluid is level with the top of the coupler at the drain plug. Wipe any excess fluid from around the coupler.
11. Reinstall the drain plug. Check for any fluid leaks.
12. Install the repaired CRT/Optical Block Assembly into the PTV and perform any necessary adjustments.

Optical assembly replacement parts list

48PP9103 and 48P977/xx02
00706075 0001

	Ref.	Description	Part No.
s		Focus/G2 Combo	4822 101 11836
s		Deflection Yoke (0001 & 0002)	4835 150 17151
s		Anode Lead Asm. (Green)	4835 321 27395
s		Anode Lead Asm. (Red)	4835 321 27396
s		Anode Lead Asm. (Blue)	4835 321 27397
	A	Shoulder Screws (1/4-20)	4822 502 14509
	B	Compression Spring	4822 402 10891
	D	CRT Mounting Bracket Asm.	4822 492 11512
s	E	Blue CRT (180DLB22)	4835 310 57408
s	E	Red CRT (180DLB22)	4835 310 57409
s	E	Green CRT (180DLB22)	4835 310 57411
	F	Screws, 8-32x3/8	4822 502 14511
	H	Seal f/CRT	4835 290 87008
	I	Coolant (enough to do 3 CRT's)	4835 310 57233
	K	Vent Plug	4835 432 17791
	L	Seal Fasteners	4835 290 87147
	M	Caps f/Coupler	4835 432 17736
	O	Diaphram f/Coupler	4835 525 17002
	P	Coupler, Red & Blue	4835 290 87153
	P	Coupler, Green	4835 290 87152
	R	O-Ring Seal (Lens to Coupler)	4835 290 87141
	S	Lens, C-Element, Blue & Red	4835 381 47016
	S	Lens, C-Element, Green	4835 381 47019
	W	Lens, Main, Blue	4835 381 47017
	W	Lens, Main, Red & Green	4835 381 47022
	X	Screws, 8-32x.5	4822 502 14512

54P915/xx01
00706077 0001

	Ref.	Description	Part No.
s		Focus/G2 Combo	4822 101 11836
s		Deflection Yoke	4835 150 17151
s		Anode Lead Asm. (Green)	4835 321 27395
s		Anode Lead Asm. (Red)	4835 321 27396
s		Anode Lead Asm. (Blue)	4835 321 27397
	A	Shoulder Screws (1/4-20)	4822 502 14509
	B	Compression Spring	4822 402 10891
	D	CRT Mounting Bracket Asm.	4822 492 11512
s	E	Blue CRT (P16LFM00)	4835 310 57438
s	E	Red CRT (P16LFM00)	4835 310 57436
s	E	Green CRT (P16LFM00)	4835 310 57437
	F	Screws, 8-32x3/8	4822 502 14511
	H	Seal f/CRT	4835 290 87008
	I	Coolant (enough to do 3 CRT's)	4835 310 57233
	K	Vent Plug	4835 432 17791
	L	Seal Fasteners	4835 290 87147
	M	Caps f/Coupler	4835 432 17736
	O	Diaphram f/Coupler	4835 525 17002
	P	Coupler, Red & Blue	4835 290 87153
	P	Coupler, Green	4835 290 87152
	R	O-Ring Seal (Lens to Coupler)	4835 290 87141
	S	Lens, C-Element, Blue & Red	4835 381 47016
	S	Lens, C-Element, Green	4835 381 47019
	W	Lens, Main, Blue	4835 381 47017
	W	Lens, Main, Red & Green	4835 381 47022
	X	Screws, 8-32x.5	4822 502 14512

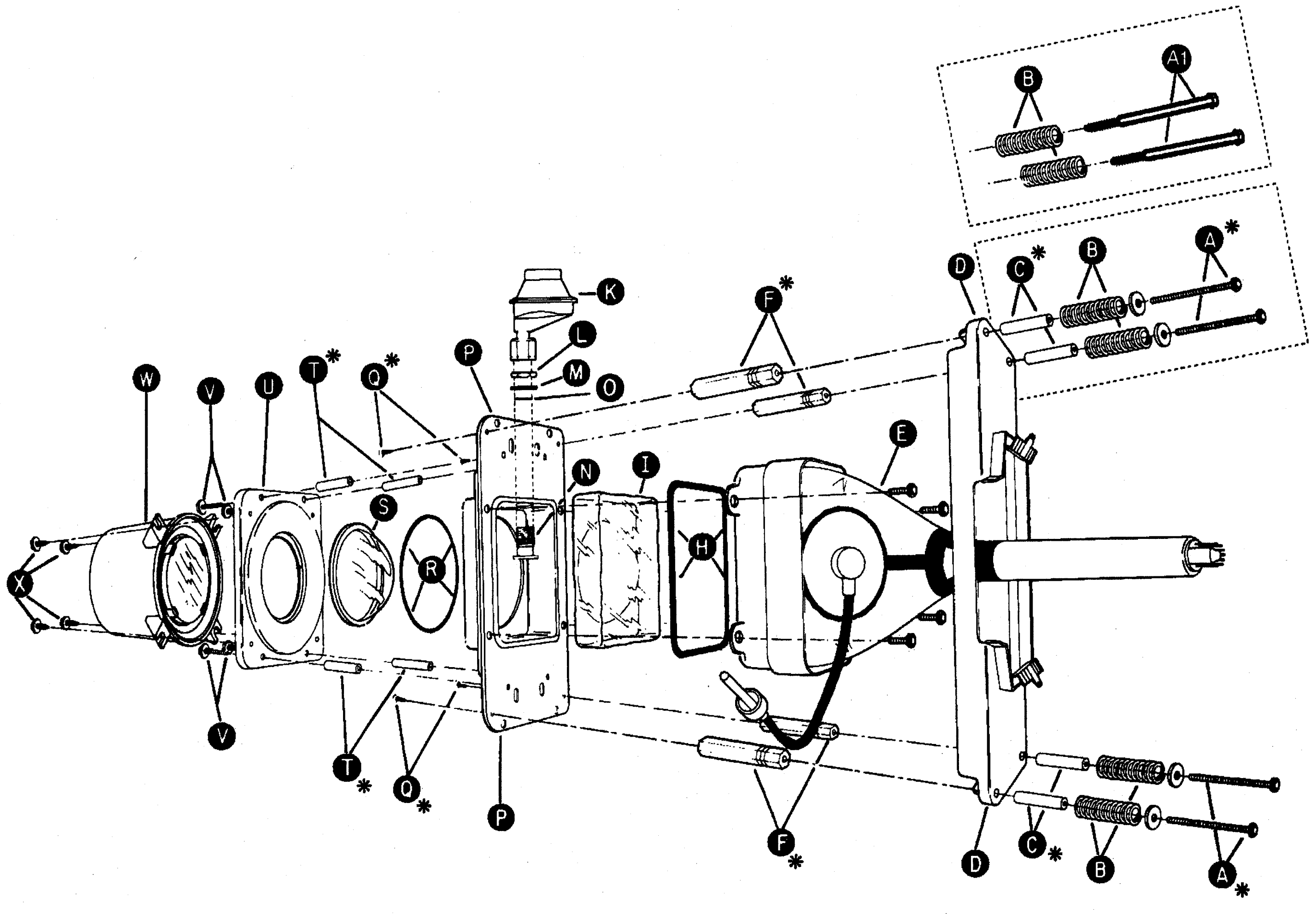
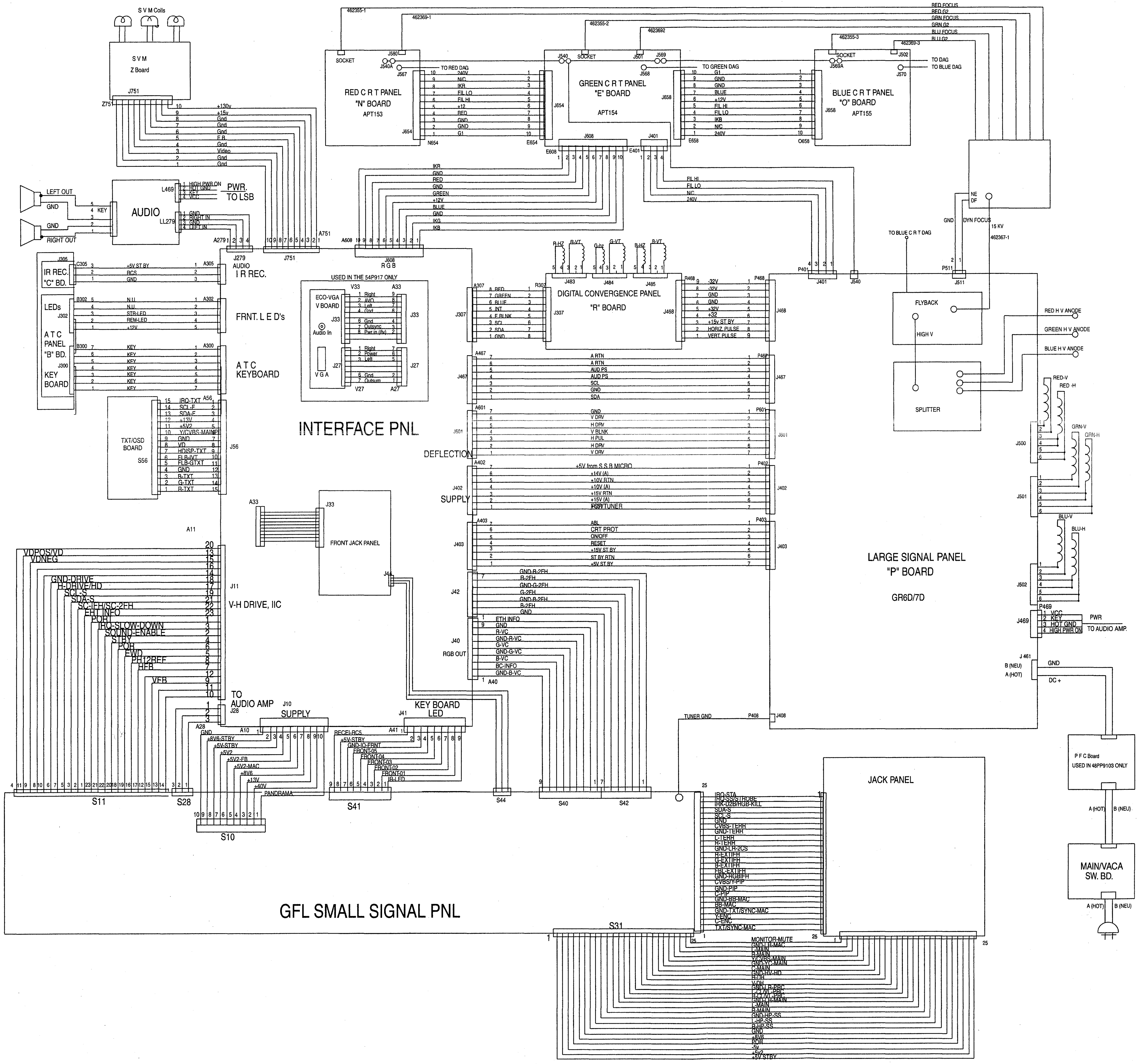


Fig. 4.2

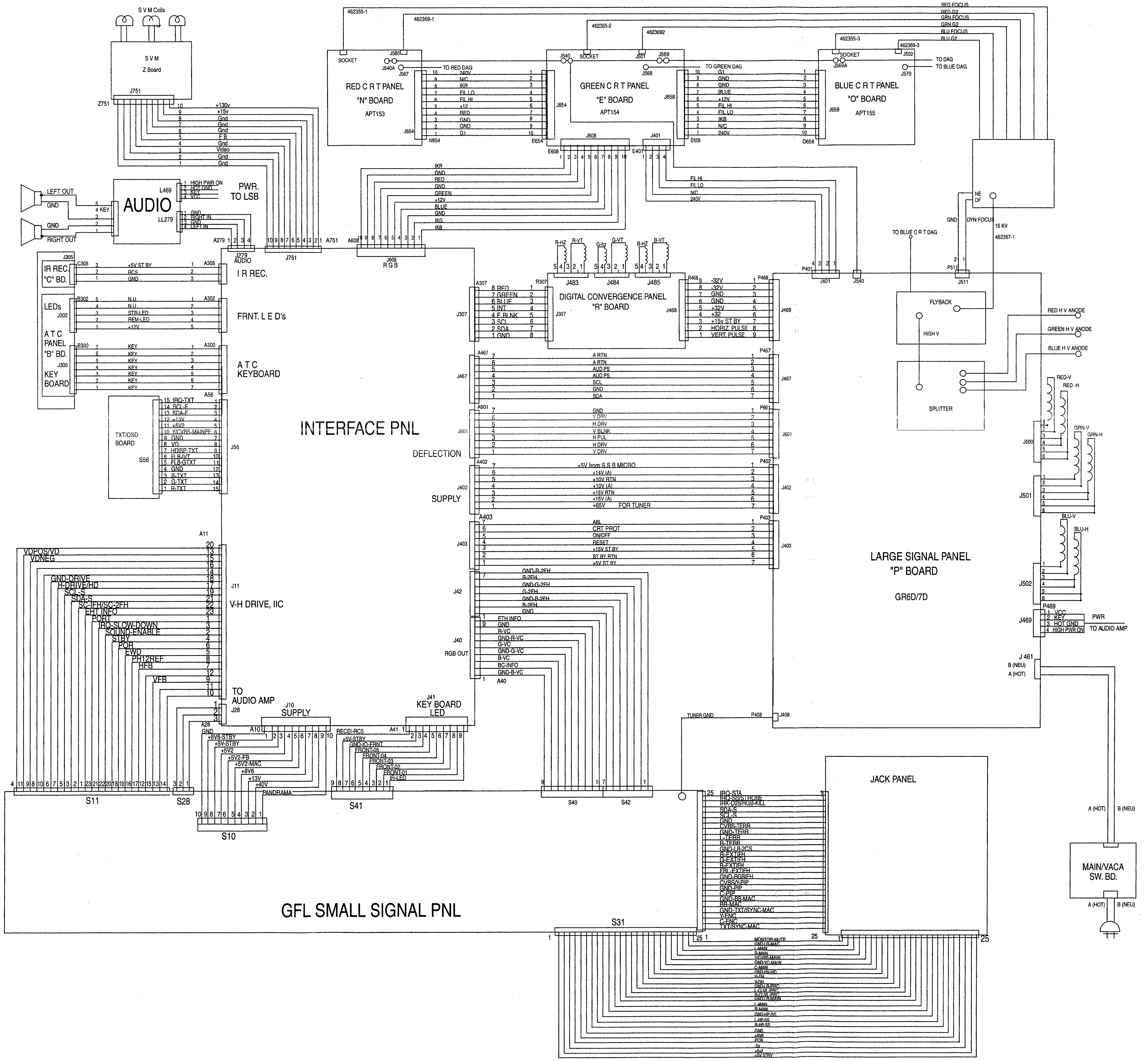
5. Wiring diagram

Wiring diagram for 48PP9103


S V M Coils
S V M
Z Board
J751
AUDIO
LEFT OUT
RIGHT OUT
PWR.
TO LSB
RED C R T PANEL
"N" BOARD
APT153
GREEN C R T PANEL
"E" BOARD
APT154
BLUE C R T PANEL
"O" BOARD
APT155
SOCKET
TO RED DAG
TO GREEN DAG
TO BLUE DAG
TO DAG
RED FOCUS
RED G2
GRN FOCUS
GRN G2
BLU FOCUS
BLU G2
IR REC.
"C" BD.
LEDs
A T C
PANEL
"B" BD.
KEY
BOARD
AUDIO
I R REC.
FRNT. L E D's
A T C
KEYBOARD
USED IN THE 54P917 ONLY
ECO-VGA
V BOARD
Audio In
V G A
INTERFACE PNL
TXT/OSD
BOARD
S56
DEFLECTION
SUPPLY
DIGITAL CONVERGENCE PANEL
"R" BOARD
FLYBACK
HIGH V
SPLITTER
RED H V ANODE
GREEN H V ANODE
BLUE H V ANODE
TO BLUE C R T DAG
DYN FOCUS
15 KV
FRONT JACK PANEL
V-H DRIVE, IIC
VDPOS/VD
VDNEG
GND-DRIVE
H-DRIVE/HD
SCL-S
SDA-S
SC-1FH/SC-2FH
EHT INFO
PORT
IRQ-SLOW-DOWN
SOUND-ENABLE
STBY
POR
EWD
PH12REF
HFB
VFB
TO
AUDIO AMP
SUPPLY
KEY BOARD
LED
LARGE SIGNAL PANEL
"P" BOARD
GR6D/7D
PWR
TO AUDIO AMP.
GND
DC +
P F C Board
USED IN 48PP9103 ONLY
MAIN/VACA
SW. BD.
JACK PANEL
S11
S28
S41
S44
S40
S42
S10
S31
GFL SMALL SIGNAL PNL

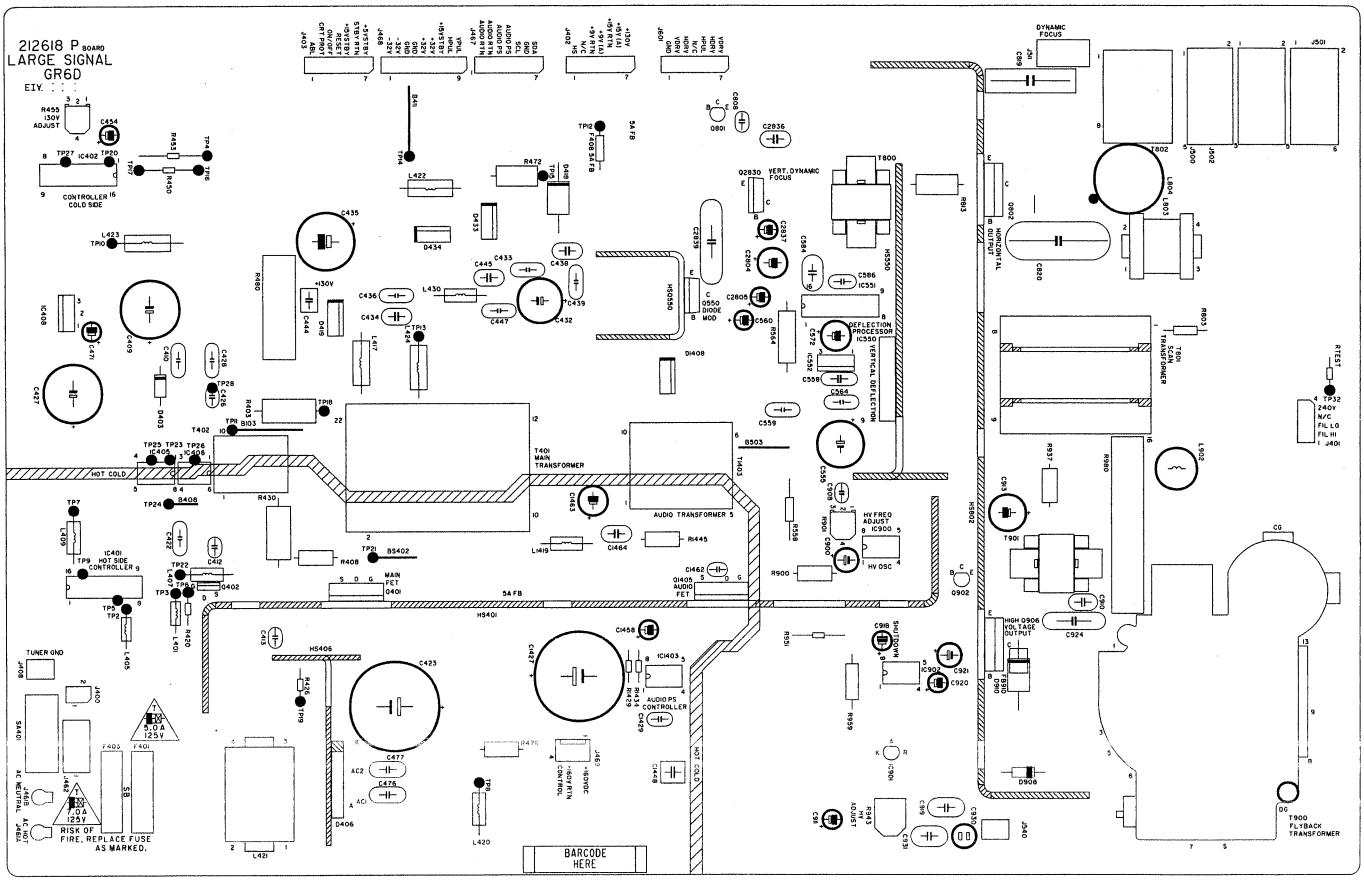
Wiring diagram

Wiring diagram for 48P977/XX02 and 54P915/XX01


S V M Coils
S V M
Z Board
J751
Z751
RED C R T PANEL
"N" BOARD
APT153
GREEN C R T PANEL
"E" BOARD
APT154
BLUE C R T PANEL
"O" BOARD
APT155
SOCKET
TO RED DAG
TO GREEN DAG
TO DAG
TO BLUE DAG
RED FOCUS
RED G2
GRN FOCUS
GRN G2
BLU FOCUS
BLU G2
LEFT OUT
RIGHT OUT
GND
KEY
AUDIO
L469
LL279
PWR.
TO LSB
HIGH PWR ON
HOT GND
KEY
VCC
RIGHT IN
LEFT IN
J279
AUDIO
J608
R G B
IR REC
"C" BD.
I R REC.
LEDs
FRNT. L E D's
A T C
PANEL
"B" BD.
KEY
BOARD
A T C
KEYBOARD
TXT/OSD
BOARD
S56
INTERFACE PNL
DEFLECTION
SUPPLY
V-H DRIVE, IIC
TO
AUDIO AMP
J28
J10
SUPPLY
J41
KEY BOARD
LED
RGB OUT
DIGITAL CONVERGENCE PANEL
"R" BOARD
J483
J484
J485
FLYBACK
HIGH V
SPLITTER
RED H V ANODE
GREEN H V ANODE
BLUE H V ANODE
DYN FOCUS
15 KV
TO BLUE C R T DAG
LARGE SIGNAL PANEL
"P" BOARD
GR6D/7D
PWR
TO AUDIO AMP.
J 461
B (NEU)
A (HOT)
MAIN/VACA
SW. BD.
TUNER GND
JACK PANEL
S11
S28
S10
S41
S40
S42
S31
GFL SMALL SIGNAL PNL

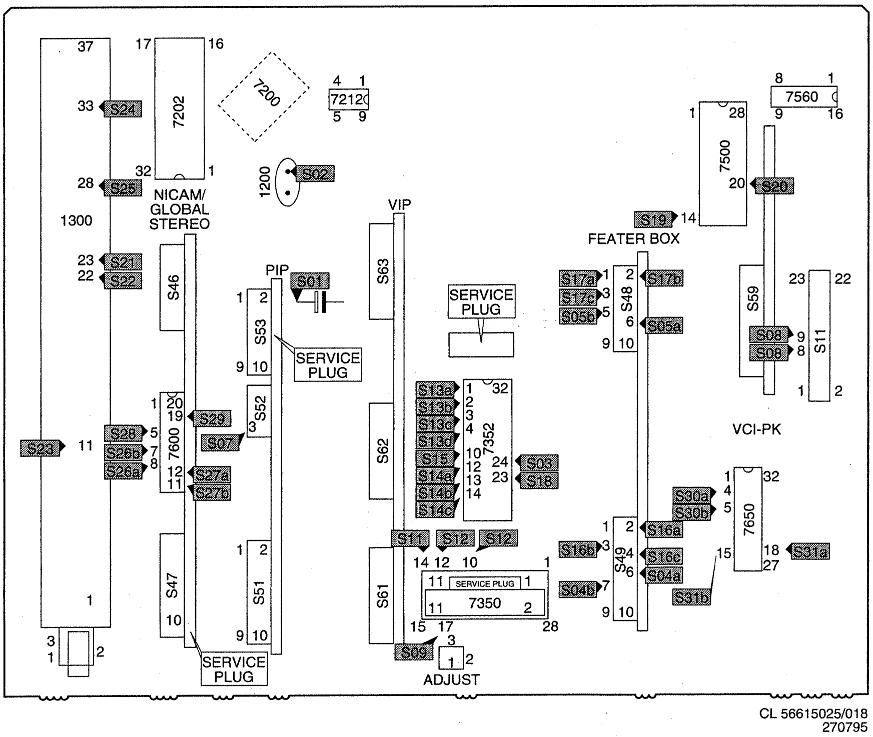
Survey of testpoints

Large Signal Panel


212618 P BOARD
LARGE SIGNAL
GR6D
R455 130V ADJUST
CONTROLLER COLD SIDE
IC402
TP27
TP20
TP17
TP16
TP4
TP10
L423
IC408
C409
C427
C471
TP28
TP11
TP18
T402
R403
B103
TP25 TP23 TP26
IC405 IC406
HOT COLD
TP24
B408
TP7
IC401 HOT SIDE CONTROLLER
TP9
TP22
TP3
TP5
TP2
TP6
Q402
TUNER GND
J408
S8401
F403 F401
5.0 A 125V
7.0 A 125V
RISK OF FIRE, REPLACE FUSE AS MARKED.
J461B AC NEUTRAL
J461A AC HOT
C435
+130V
C444
D419
L422
D434
R480
TP14
B411
TP13
L424
L417
C436
C434
L430
C445
C433
C438
C432
C439
C447
R472
TP15
TP12
F408 SAFB
T401 MAIN TRANSFORMER
R430
TP21
BS402
R408
MAIN FET Q401
SAFB
HS401
HS406
R426
TP19
C423
C413
L421
C477
C476
AC1
AC2
D406
C427
C1458
IC1403
AUDIO PS CONTROLLER
C1429
J463 +160V RTN +160VDC CONTROL
TP8
L420
C1448
BARCODE HERE
HOT COLD
AUDIO TRANSFORMER
T1403
C1463
C1464
L1419
R1445
C1462
Q1405 AUDIO FET
B503
C559
C564
C558
IC550
DEFLECTION PROCESSOR IC550
VERTICAL DEFLECTION
C572
R564
C2805
C560
C555
C550 DIODE MOD
HS0550
C2839
Q2830 VERT. DYNAMIC FOCUS
C2837
C2804
C584
C586
IC551
HS550
T800
Q801
C808
C2836
R900
HV FREQ ADJUST
IC900
HV OSC
C900
R558
R901
C908
Q902
C918 SHUTDOWN
IC902
C921
C920
R959
R951
C901
R943 HV ADJUST
C95
C931
C930
C919
J540
DYNAMIC FOCUS
J511
C89
Q802 HORIZONTAL OUTPUT
C820
HS802
T802
L804
L803
J502
J501
R803
T601 SCAN TRANSFORMER
RTEST
TP32
240V N/C FIL LO FIL HI J401
R980
R937
L902
C93
T901
HIGH Q906 VOLTAGE OUTPUT
C910
C924
D908
T900 FLYBACK TRANSFORMER
J403
J468
J467
J402
J601

2618CLD.AI
231097

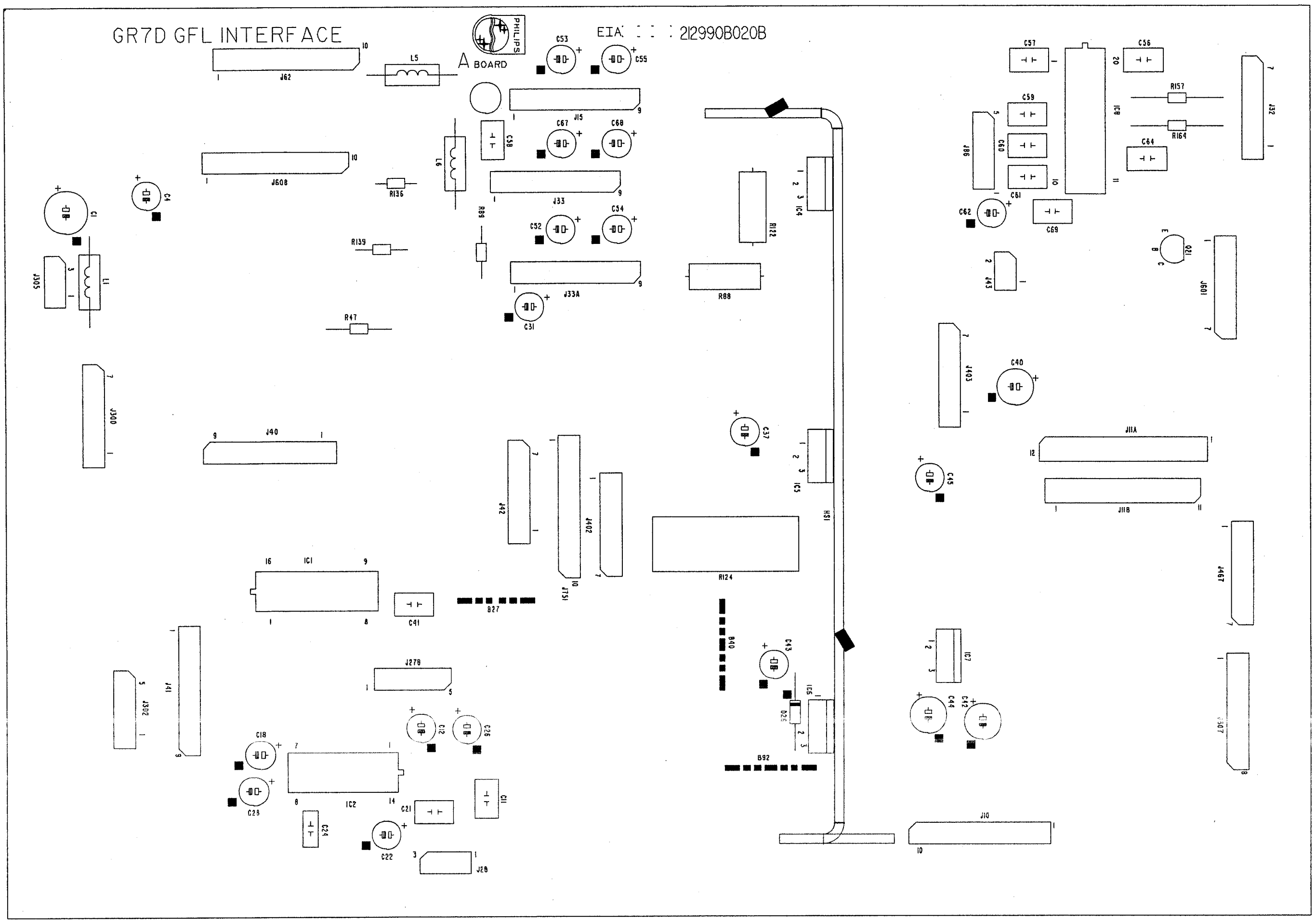
Small Signal Panel


1300
37
33
S24
28
S25
23
S21
22
S22
S23
11
1
3
2
1
17
16
7202
32
1
NICAM/ GLOBAL STEREO
7200
4 1
7212
5 9
1200
S02
S46
S47
10
PIP
S01
1 2
S53
9 10
SERVICE PLUG
S52
3
S51
1 2
9 10
SERVICE PLUG
7600
1 20
19
S29
S28
5
S26b
7
S26a
8
S07
12
S27a
11
S27b
VIP
S63
S62
S61
SERVICE PLUG
7352
1 32
S13a
2
S13b
3
S13c
4
S13d
10
S15
12
S14a
13
S14b
14
S14c
24
S03
23
S18
S11
S12
S12
14 12 10
1
11
SERVICE PLUG
1
7350
11
2
15 17
28
3
S09
1 2
ADJUST
FEATER BOX
S48
S17a
1
2
S17b
S17c
3
S05b
5
6
S05a
9 10
S49
1 2
S16a
S16b
3
4
S16c
6
S04a
S04b
7
9 10
S19
14
1 28
7500
20
S20
8 1
7560
9 16
S59
S08
9
S08
8
23 22
S11
1 2
VCI-PK
7650
1
32
4
S30a
5
S30b
18
S31a
15
27
S31b

CL 56615025/018
270795

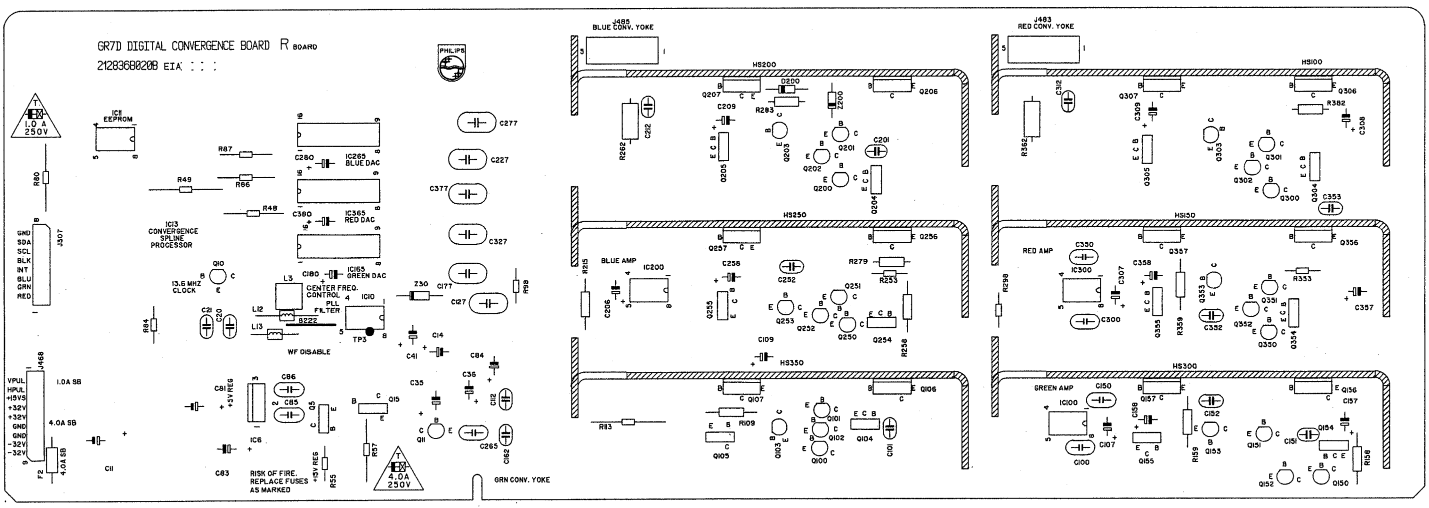
Survey of testpoints

Interface Panel


GR7D GFL INTERFACE
PHILIPS
A BOARD
EIA
212990B020B
J62
L5
C53
C55
J15
C67
C68
C38
L6
J608
R136
J33
C52
C54
R89
C1
C4
R139
J33A
C51
L1
J305
R47
J300
J40
J42
J402
J731
IC1
C41
B27
J278
J302
J41
C18
C28
IC2
C23
C26
C21
C11
C24
C22
J28
R122
R88
IC4
R124
IC5
C37
B40
C43
IC6
B92
C57
C56
C59
R157
C60
R164
J86
IC8
C64
C61
C62
C69
J32
Q21
J601
J403
C40
J11A
J118
C45
J467
IC7
C44
C42
J407
J10

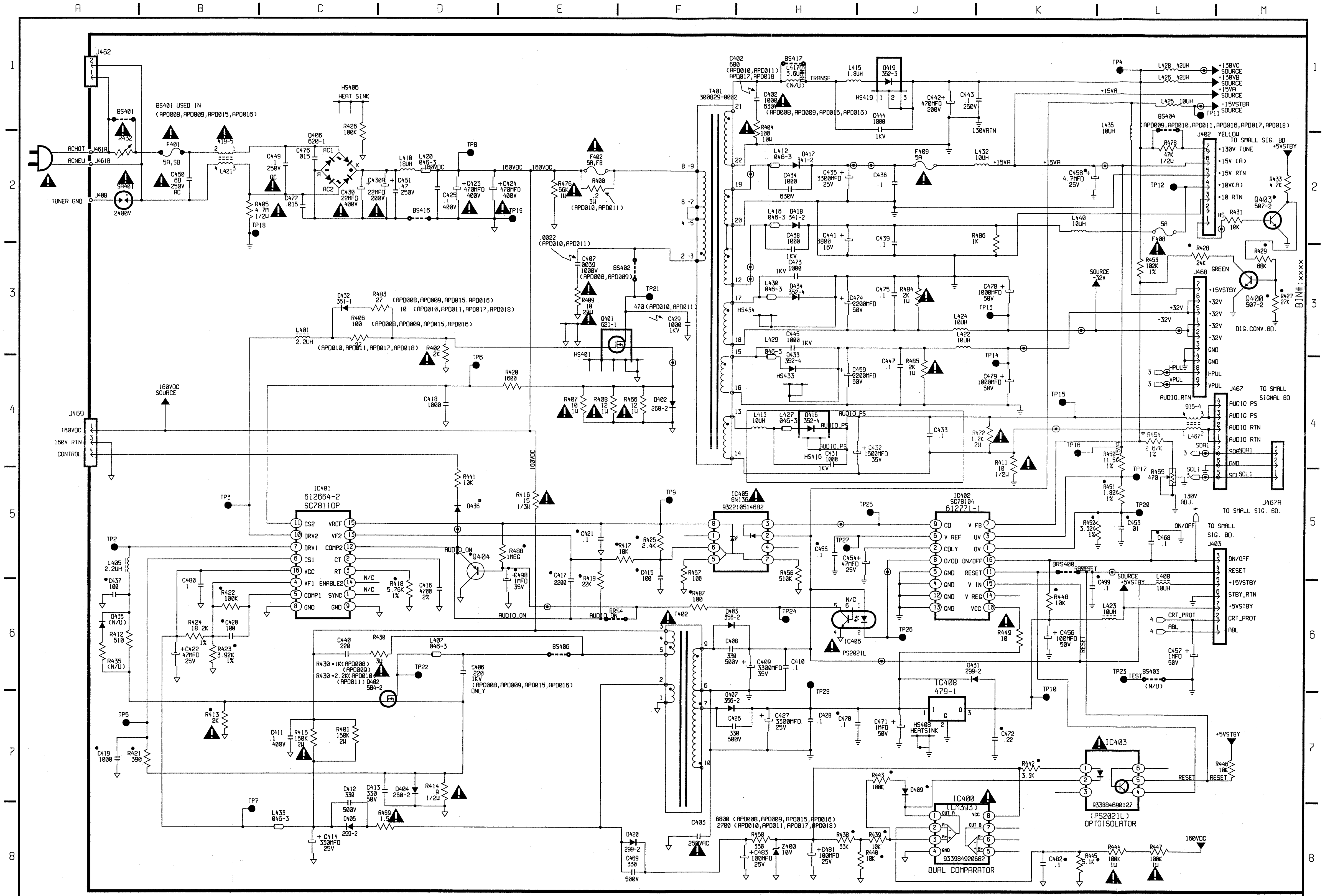
2990CLD.AI
291097

Digital Convergence Panel


GR7D DIGITAL CONVERGENCE BOARD R BOARD
2128368020B EIA
PHILIPS
1.0 A 250V
IC11 EEPROM
R80
R87
R49
R66
R48
IC265 BLUE DAC
IC365 RED DAC
IC165 GREEN DAC
C280
C380
C180
IC13 CONVERGENCE SPLINE PROCESSOR
13.5 MHZ CLOCK
Q10
L3
CENTER FREQ. CONTROL
PLL FILTER
IC10
L12
L13
B222
TP3
WF DISABLE
R64
C21
C20
GND
SDA
SCL
BLK
INT
BLU
GRN
RED
J307
J468
VPUL
HPUL
+15VS
+32V
+32V
GND
GND
-32V
-32V
1.0A SB
4.0A SB
F2
C11
C81
+5V REG
C86
C85
Q5
IC6
C83
RISK OF FIRE. REPLACE FUSES AS MARKED
+5V REG
R55
R57
4.0A 250V
C277
C227
C377
C327
C127
R98
Z30
C177
C41
C14
C84
C35
C36
C32
Q15
Q11
C265
C162
GRN CONV. YOKE
J485 BLUE CONV. YOKE
HS200
Q207
D200
C209
R283
R282
C212
Z200
Q206
Q205
Q203
Q201
C201
Q202
Q200
Q204
HS250
Q257
Q256
BLUE AMP
IC200
R215
C258
C252
R279
R253
C206
Q255
Q253
Q252
Q251
Q250
Q254
R258
C109
HS350
C107
Q107
Q106
R83
R109
Q105
Q103
Q101
Q102
Q100
Q104
C101
J483 RED CONV. YOKE
HS100
C312
Q307
Q306
R362
C309
R382
C308
Q305
Q303
Q301
Q302
Q300
Q304
C353
HS150
RED AMP
C350
IC300
Q357
Q356
R298
C307
C358
Q353
R353
Q355
R359
C352
Q352
Q351
Q350
Q354
C357
C300
HS300
GREEN AMP
IC100
C150
Q157
C136
C137
C158
C152
C100
C107
Q155
R159
Q153
Q151
C151
Q154
R158
Q152
Q150

2836CLD.AI
231097

7. Large signal panel - Section 1


A
B
C
D
E
F
H
J
K
L
M
1
2
3
4
5
6
7
8
J462
BS401
R432
ACHOT
ACNEU
J461A
J461B
SA401
2400V
TUNER GND
J408
BS401 USED IN (APD008,APD009,APD015,APD016)
F401
5A,SB
419-5
L421
C450
.68
250V
AC
R405
4.7M
1/2W
TP18
HS406
HEAT SINK
R426
100K
D406
620-1
C449
.1
250V
AC
C476
015
C477
015
C430
22MFD
400V
C430A
22MFD
200V
C451
47
250V
L410
10UH
L420
046-3
160VDC
C425
.1
400V
+C423
470MFD
400V
+C424
470MFD
400V
TP8
TP19
BS416
160VDC
R476
56K
1W
F402
5A,FB
R400
2
3W
(APD010,APD011)
C402
680
(APD010,APD011)
APD017,APD018)
BS417
L417
3.6UH
(N/U)
TRANSF
T401
300829-0002
C422
1000
630V
(APD008,APD009,APD015,APD016)
R404
100
1W
L415
1.8UH
D419
352-3
HS419
C444
1000
1KV
C442
470MFD
200V
C443
.1
250V
130VRTN
L412
046-3
D417
341-2
C434
1000
630V
C435
3300MFD
25V
C436
.1
F409
5A
L432
10UH
+15VA
L416
046-3
D418
341-2
C438
1000
1KV
C441
3800
16V
C439
.1
R486
1K
L440
10UH
C473
1000
1KV
L430
046-3
D434
352-4
HS434
C474
2200MFD
50V
C475
.1
R484
2K
1W
C478
1000MFD
50V
TP13
L424
10UH
L429
046-3
C445
1000
1KV
D433
352-4
HS433
L422
10UH
C459
2200MFD
50V
C447
.1
R485
2K
1W
TP14
C479
1000MFD
50V
L413
10UH
L427
046-3
D416
352-4
AUDIO_PS
HS416
C431
1000
1KV
C432
1500MFD
35V
C433
.1
R472
1.2K
2W
R411
10
1/2W
TP4
L428 .42UH
+130VC SOURCE
+130VB SOURCE
+15VA SOURCE
L426 .42UH
L425 10UH
+15VSTBA SOURCE
TP11
+15VA
BS404
(APD009,APD010,APD011,APD016,APD017,APD018)
L435
10UH
J402 YELLOW
TO SMALL SIG. BD
R478
47K
1/2W
+130V TUNE
+15V (A)
+15V RTN
+10V(A)
+10 RTN
C458
4.7MFD
25V
TP12
R433
4.7K
Q403
507-2
R431
10K
HS
+5VSTBY
5A
F408
R453
102K
1%
R428
24K
GREEN
R429
68K
SOURCE
-32V
J460
+15VSTBY
+32V
-32V
GND
HPUL
VPUL
Q400
507-2
R427
27K
DIG.CONV.BD.
BIN:xxxx
AUDIO_RTN
J467
TO SMALL SIGNAL BD
AUDIO PS
AUDIO RTN
915-4
L462
R454
2.67K
1%
SDA1
SCL1
J467A
TO SMALL SIG. BD.
TP15
TP16
TP17
R450
11.5K
1%
R455
470
R451
1.82K
1%
130V ADJ.
TP20
R452
3.32K
1%
C453
.01
ON/OFF
C468
.1
TO SMALL SIG. BD.
J403
RESET
+15VSTBY
STBY_RTN
+5VSTBY
CRT_PROT
ABL
0022
(APD010,APD011)
C407
0039
1000V
(APD008,APD009)
BS402
TP21
470(APD010,APD011)
R409
10
2W
Q401
621-1
HS401
C429
1000
1KV
D432
351-1
R403
27 (APD008,APD009,APD015,APD016)
10 (APD010,APD011,APD017,APD018)
R406
100
(APD008,APD009,APD015,APD016)
L401
2.2UH
(APD010,APD011,APD017,APD018)
R402
2K
TP6
R420
1600
C418
1000
R407
10
1W
R408
12
1W
R466
12
1W
D422
260-2
160VDC SOURCE
J469
160VDC
160V RTN
CONTROL
R441
10K
D436
R416
15
1/3W
IC401
612664-2
SC78110P
CS2
DRV2
DRV1
CS1
VCC
VF1
COMP1
GND
VREF
VF2
COMP2
CT
RT
ENABLE2
SYNC
N/C
TP3
TP2
L405
2.2UH
C437
100
C400
.1
R422
100K
R418
5.76K
1%
C416
4700
2%
AUDIO_ON
Q404
R408
1MEG
C498
1MFD
35V
D435
(N/U)
R412
510
R435
(N/U)
R424
18.2K
C420
100
C422
47MFD
25V
R423
3.92K
1%
C421
.1
R417
10K
R425
2.4K
C417
2200
R419
22K
C415
100
TP9
IC405
6N136
9322105014682
R457
100
R456
510K
R497
100
BRS4
AUDIO_ON
T402
D403
356-2
TP24
C408
330
500V
C409
3300MFD
35V
C410
.1
D407
356-2
C426
330
500V
C427
3300MFD
25V
C428
.1
C470
.1
TP28
C440
220
R430
L407
046-3
BS406
R430 =1K(APD008)
(APD009)
R430 =2.2K(APD010)
(APD011)
Q402
504-2
TP22
C406
220
1KV
(APD008,APD009,APD015,APD016)
ONLY
TP5
R413
2K
C411
.1
400V
R415
150K
2W
R401
150K
2W
C419
1000
R421
390
TP7
L433
046-3
C414
330MFD
25V
C412
330
C413
330
50V
D405
299-2
D404
260-2
R414
9
1/2W
R469
1.5
D420
299-2
C469
330
500V
C403
250VAC
6800 (APD008,APD009,APD015,APD016)
2700 (APD010,APD011,APD017,APD018)
R458
330
C483
100MFD
25V
Z400
10V
C481
100MFD
25V
R438
33K
R439
10K
R440
10K
TP25
IC402
SC78104
612771-1
CO
V REF
CDLY
O/OD
GND
V FB
UV
OV
ON/OFF
RESET
V IN
V REG
VCC
TP27
C455
.1
C454
47MFD
25V
N/C
IC406
PS2021L
TP26
R449
10
BRS400
SOURCE +5VSTBY
C499
.1
L408
10UH
L423
10UH
R448
10K
C456
100MFD
50V
C457
1MFD
50V
D431
299-2
IC408
479-1
G
HS408
HEATSINK
C471
1MFD
50V
C472
22
TP10
TP23
TEST
BS403
(N/U)
IC403
R442
3.3K
933804600127
(PS2021L)
OPTOISOLATOR
R446
10K
+5VSTBY
R443
100K
D409
IC400
(LM393)
OUT A
OUT B
VCC
GND
9339849206082
DUAL COMPARATOR
C482
.1
R445
.1K
R444
100K
1W
R447
100K
1W
160VDC

NOTES:

UNLESS OTHERWISE SPECIFIED

1. CAPACITANCE VALUES OF ONE OR MORE ARE PICOFARADS.
2. CAPACITANCE VALUES LESS THAN ONE ARE MICROFARADS.
3. RESISTORS ARE IN OHMS, 1/4W, 5%.
4. ● = SURFACE MOUNTED DEVICE (SMD).
5. ⚠ = PCEC REPLACEMENT PART NUMBERS ONLY.
6. ⊙ = LAYOUT INDUCED JUMPER.
7. × = SEE COMPONENT VALUE TABLE.

A | B | C | D | E | F | H | J | K | L | M

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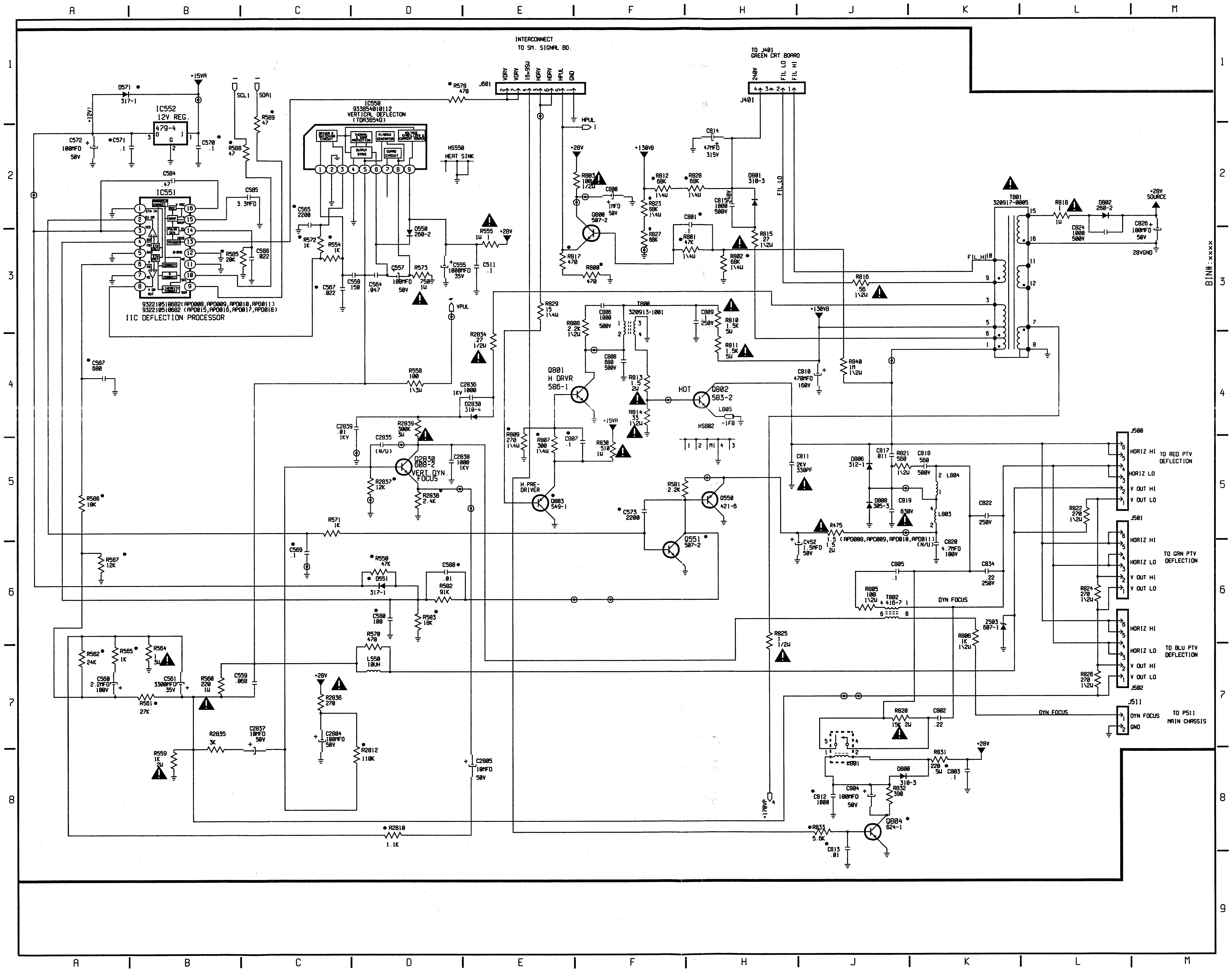
Large signal panel - Section 2


INTERCONNECT TO SM. SIGNAL BD.
VDRV
VDRV
16.95W
HDRV
HDRV
HPUL
VPUL
GND
J501
TO J401 GREEN CRT BOARD
240V
FIL LO
FIL HI
J401
IC552 12V REG. 479-4
IC551 IIC DEFLECTION PROCESSOR
9322105106822(APD008,APD009,APD010,APD011)
9322105106822(APD015,APD016,APD017,APD018)
IC550 933854010112 VERTICAL DEFLECTON (TDA3654Q)
HS550 HEAT SINK
+15VA
+12V1
D571 317-1
SCL1
SDA1
C572 100MFD 50V
C571 .1
C570 .1
R588 47
R589 47
C584 .47
C585 3.3MFD
C586 .022
R585 20K
C565 2200
R572 1K
R554 1K
C567 .022
C558 150
C564 .047
C557 100MFD 50V
R573 750 1W
D550 200-2
C555 1000MFD 35V
C511 .1
R555 1 1W
+28V
R578 470
VPUL
HPUL
+28V
R803 100 1/2W
C800 1MFD 50V
Q800 507-2
R817 470
R800 470
+130VB
R812 68K 1\4W
R828 68K 1\4W
R823 68K 1\4W
R827 68K
C814 47MFD 315V
D801 310-3
C815 1000 500V
C801 .1
R801 47K 1\4W
R815 27 1\2W
R802 68K 1\4W
T801 320917-0005
R818 1 1W
D802 200-2
C824 1000 500V
C826 100MFD 50V
+28V SOURCE
28VGND
FIL_HI
R816 56 1\2W
R829 15 1\4W
T800 320913-1001
C806 1000 500V
R808 2.2K 1\2W
C809 .1 250V
R810 1.5K 5W
R811 1.5K 5W
+130VB
C810 470MFD 160V
R840 1M 1\2W
C808 680 500V
Q801 H DRVR 586-1
R813 1.5 2W
R814 33 1\2W
HOT
Q802 583-2
L805 -1F8
HS802
R2834 27 1/2W
C587 680
R558 100 1\3W
C2836 1000 1KV
D2830 310-4
C2839 .01 1KV
C2835 (N/U)
R2839 300K 3W
Q2830 608-2 VERT DYN. FOCUS
C2838 1000 1KV
R2837 12K
R2838 2.4K
R809 270 1\4W
R807 300 1\4W
C807 .1
R830 510 1W
+15VA
H.PRE-DRIVER
Q803 549-1
R581 2.2K
Q550 421-6
C573 2200
Q551 507-2
R586 10K
R571 1K
C569 .1
R587 12K
R550 47K
D551 317-1
C588 .01
R582 91K
C580 100
R583 18K
R570 470
L550 10UH
R562 24K
R565 1K
R564 1 3W
C560 2.2MFD 100V
C561 3300MFD 35V
R561 27K
R560 220 1W
C559 .068
+28V
R2836 270
C2804 100MFD 50V
R2812 110K
R2835 3K
C2837 10MFD 50V
R559 1K 2W
C2805 10MFD 50V
R2810 1.1K
C811 2KV 330PF
D806 312-1
C817 .011
R821 560 1\2W
C818 560 500V
L804
D808 305-5
C819 630V
L803
R475 1.5 2W (APD008,APD009,APD010,APD011)
C452 1.5MFD 50V
C820 4.7MFD 100V (N/U)
C822 250V
C805 .1
C834 22 250V
R805 100 1\2W
T802 416-7
DYN FOCUS
Z503 607-1
R806 1K 1\2W
R825 1 1/2W
R822 270 1\2W
R824 270 1\2W
R826 270 1\2W
J500
HORIZ HI
HORIZ LO
V OUT HI
V OUT LO
TO RED PTV DEFLECTION
J501
TO GRN PTV DEFLECTION
J502
TO BLU PTV DEFLECTION
J511
DYN FOCUS
GND
TO P511 MAIN CHASSIS
R820 15K 2W
C802 .22
+28V
R831 220 .5W
C803 .1
K801
D800 310-3
R832 390
C804 100MFD 50V
C812 1000
+170VP
R833 5.6K
C813 .01
Q804 624-1
BIN#:xxxx
A
B
C
D
E
F
H
J
K
L
M
1
2
3
4
5
6
7
8
9

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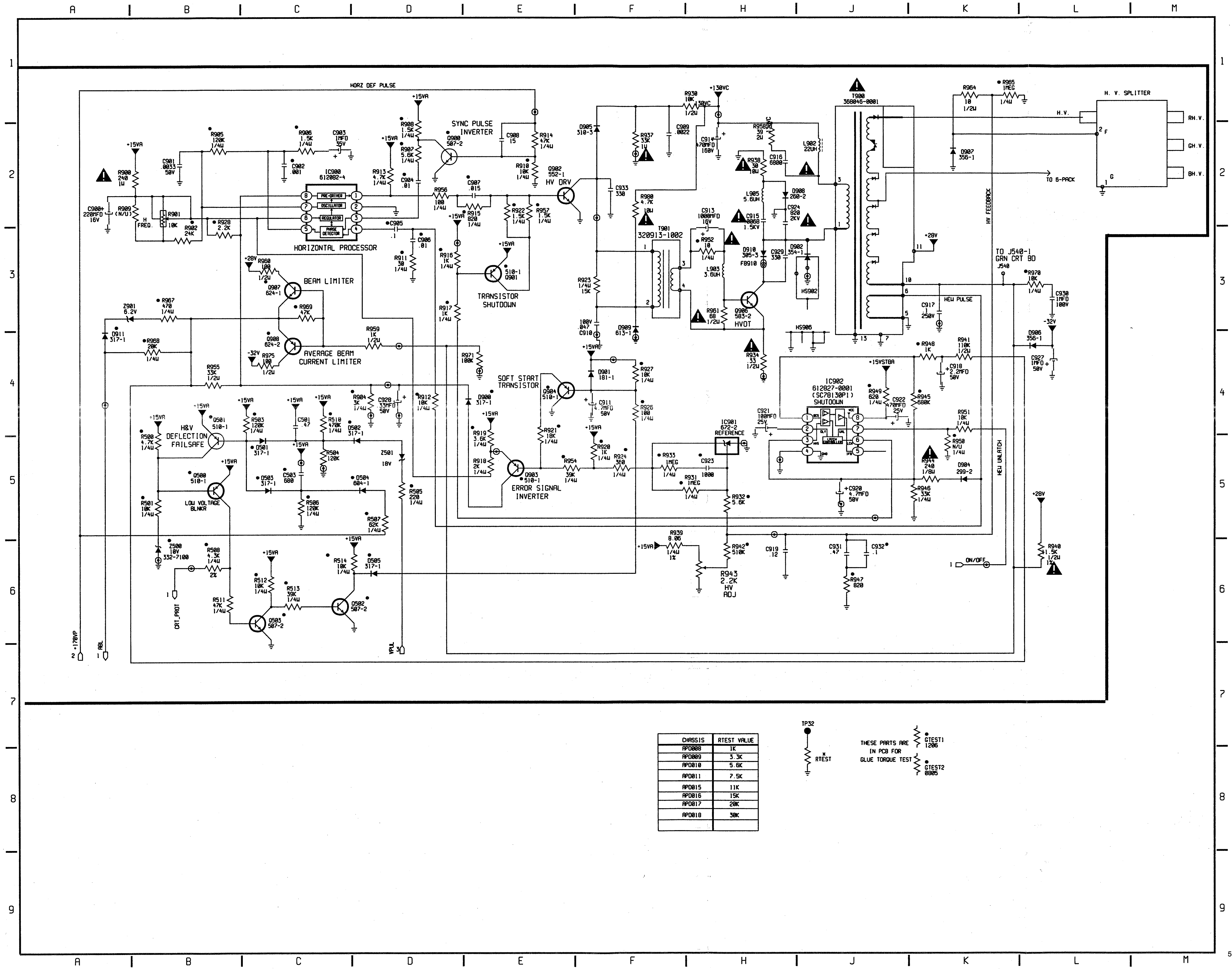
Large signal panel - Section 3


A B C D E F H J K L M
1 2 3 4 5 6 7 8 9
HORZ DEF PULSE
HORIZONTAL PROCESSOR
IC900 612882-4
PRE-DRIVER
OSCILLATOR
REGULATOR
PHASE DETECTOR
SYNC PULSE INVERTER
Q900 507-2
HV DRV
Q902 552-1
TRANSISTOR SHUTDOWN
Q901 510-1
BEAM LIMITER
Q907 624-1
AVERAGE BEAM CURRENT LIMITER
Q908 624-2
SOFT START TRANSISTOR
Q904 510-1
ERROR SIGNAL INVERTER
Q903 510-1
H&V DEFLECTION FAILSAFE
Q501 510-1
LOW VOLTAGE BLNKR
Q500 510-1
Q503 507-2
Q502 507-2
T901 320913-1002
T900 368046-0001
HVOT
Q906 583-2
HS906
HS902
IC901 672-2 REFERENCE
IC902 612827-0001 (SC78130P1) SHUTDOWN
R943 2.2K HV ADJ
H. V. SPLITTER
H.V.
RH.V.
GH.V.
BH.V.
TO 6-PACK
TO J540-1 GRN CRT BD J540
HV FEEDBACK
HEW PULSE
HEW UNLATCH
ON/OFF
CRT_PROT
+170VP
ABL
VPUL
+15VA
+130VC
+28V
-32V
+15VSTBA
H FREQ.

CHASSIS	RTEST VALUE
APD008	1K
APD009	3.3K
APD010	5.6K
APD011	7.5K
APD015	11K
APD016	15K
APD017	20K
APD018	30K

THESE PARTS ARE IN PCB FOR GLUE TORQUE TEST

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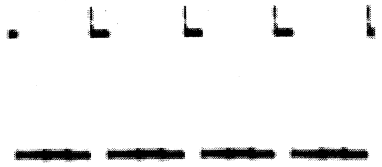
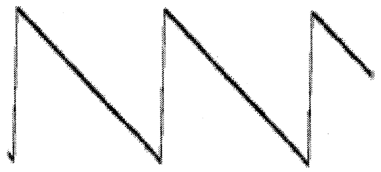
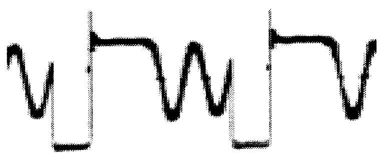
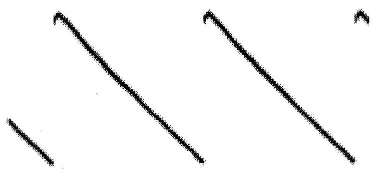
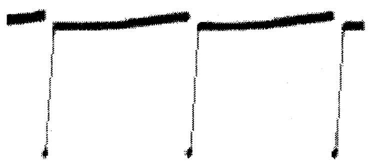
Wave forms Large signal panel

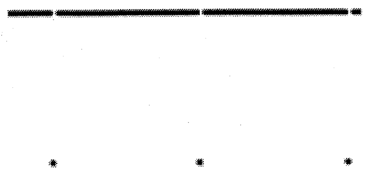

1 13Vp-p 5uSec.

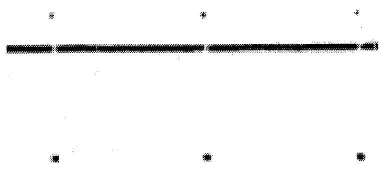

2 8Vp-p 5mSec.

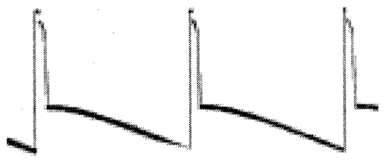

3 (3a)

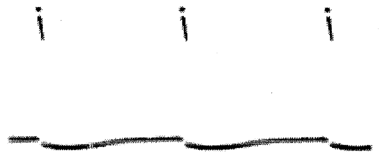

4 2Vp-p 5mSec.

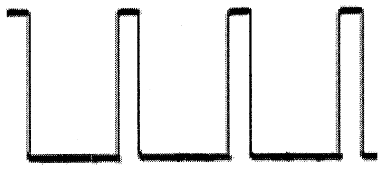

5 2.8Vp-p 5uSec.

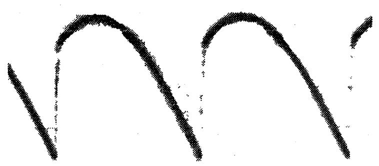

6 4.5Vp-p 5mSec.

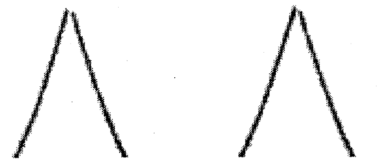

7 3vp-p 5mSec.

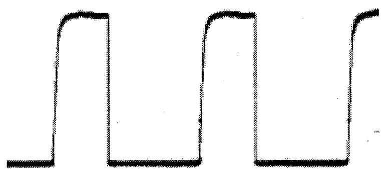

8 45Vp-p 5mSec.

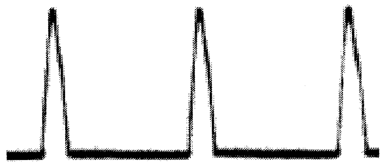

9 22Vp-p 5mSec.

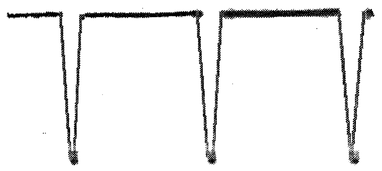

10 (3b)

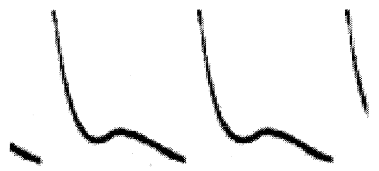

11 2.3Vp-p 5mSec.

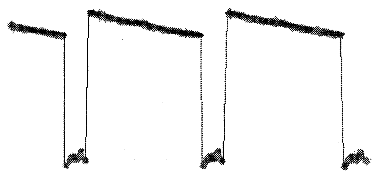

12 (3c)

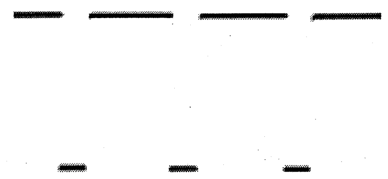

13 130Vp-p 20uSec.

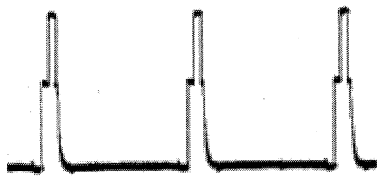

14 (3d)

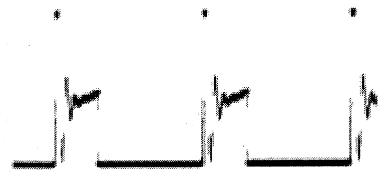

15 (3e)

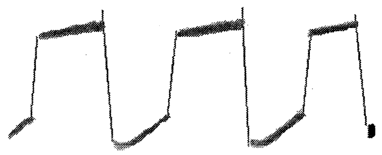

16 (3f)

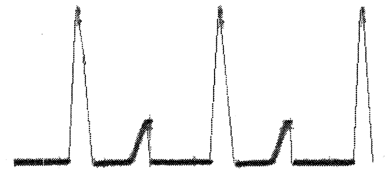

17 5Vp-p 20uSec.

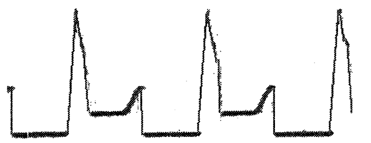

18 130Vp-p 20uSec.

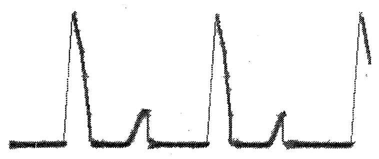

19 5Vp-p 20uSec.


20 8Vp-p 20uSec.


21 3Vp-p 20uSec.


22 825Vp-p 20uSec.


23 825Vp-p 20uSec.


24 38Vp-p 20uSec.

LARGE SIGNAL PANEL WAVEFORM NOTES:

1. ALL VOLTAGES AND WAVEFORMS WERE TAKEN WITH A NTSC COLOR BAR PATTERN SIGNAL APPLIED.
2. SWEEP TIME/DIV SETTINGS ARE SHOWEN JUST BELOW THE PHOTOS IN THECALIBRATED POSITION. HORIZONTAL POSITIONING OF THE WAVEFORMS WAS AJUSTED FOR MAXIUM CLAIRTY.

3 a T401, PINS 2&3, 240Vp-p, 5usec.
T401, PINS 4-7, 1280Vp-p, 5usec.
Q401 Drain, TP21, 220Vp-p, 5usec.
Q402 Drain, TP22, 310Vp-p, 5usec.
b Q800-E, 25Vp-p, 20usec.
Q800-B, 29Vp-p, 20usec.
c Q550-E, 10Vp-p, 5msec.
Q2830-C, 400Vp-p, 5msec.
d Q802-C, 950Vp-p, 20usec.
T801, PIN3, 375Vp-p, 20usec.
T801, PIN6, 112Vp-p, 20usec.
T801, PIN9, 7Vp-p, 20usec.
e T801, PIN10, 25Vp-p, 20usec.
T801, PIN15, 250Vp-p, 20usec.
f Q908-B, 6.2Vp-p, 5msec.
T900, PIN10, 6.2Vp-p, 5msec.

LARGE SIGNAL PANEL SCHEMATIC NOTES:

UNLESS OTHERWISE SPECIFIED:

1. ALL VOLTAGES AND WAVEFORMS WERE TAKEN UNDER THE CONDITIONS FOLLOWS:
   - LINE VOLTAGE MAINTAINED AT 120VAC, 60HZ VIA AN ISOLATION TRANSFORMER.

   CUSTOMER CONTROLS SET TO FACTORY DEFAULT LEVELS AS FOLLOWS:
   - COLOR, TINT, & BRIGHTNESS SET TO MIDRANGE, PICTURE SET TO APPROXIMATELY 2/3 (BETWEEN MIDRANGE AND FULL ON).
2. WAVEFORMS AND VOLTAGES (WITHOUT BRACKETS) WERE TAKEN WITH AN NTSC SIGNAL GENERATOR DELIVERING 10mVp-p AT THE ANTENNA TERMINALS.
3. VOLTAGES SHOWN WITH BRACKETS WERE TAKEN WITH NO SIGNAL APPLIED;

ls_wave.cdr
221097

Component location guide - LSP - Section 1

COMPONENT GRID SCHEMATIC APD018 SECTION 1

REF. DES.	SCH. ZONE
B28	H-2
B29	H-3
B103	L-1
B106	L-4
B401	H-3
B402	L-2
B403	J-5
B404	H-5
B408	E-6
B409	J-2
B410	L-2
B411	K-3
B412	K-3
B425	H-2
B426	K-4
B448	L-5
B451	J-6
B469	D-5
B557	L-4
B588	L-5
B589	L-4
B930	L-1
B942	L-3
BRS4	E-6
BRS400	K-5
BS401	A-1
BS402	F-3
BS403	L-6
BS404	L-1
BS406	E-6
BS416	D-2
BS417	H-1
C402	H-1
C403	F-8
C406	D-6
C407	E-3
C408	F-6
C409	H-6
C410	H-6
C411	C-7
C412	C-7
C413	D-7
C414	C-8
C415	F-5
C416	D-6
C417	E-5
C418	D-4
C419	A-7
C420	B-6
C421	E-5
C422	B-6
C423	D-2
C424	D-2
C425	D-2
C426	F-7
C427	H-7
C428	H-7
C429	F-3
C430	C-2
C430A	D-2
C431	H-4
C432	H-4
C433	J-4
C434	H-2
C435	H-2
C436	J-2
C437	A-6
C438	H-2
C439	J-2
C440	C-6
C441	H-2
C442	J-1
C443	J-1
C444	J-1
C445	H-3
C447	J-4
C449	C-2
C450	B-2
C451	D-2
C453	L-5
C454	J-5
C455	H-5
C456	K-6
C457	L-6
C458	K-2
C459	H-4
C468	L-5
C469	F-8
C470	H-7
C471	J-7
C472	K-7
C473	H-3
C474	H-3
C475	J-3
C476	C-2
C477	C-2
C478	K-3
C479	K-4
C480	B-6
C481	H-8
C482	K-8
C483	H-8
C498	E-5
C499	K-6
D402	F-4
D403	F-6
D404	D-7
D405	C-8
D406	C-2
D407	F-7
D409	J-7
D416	H-4
D417	H-2
D418	H-2
D419	J-1
D420	F-8
D431	J-6
D432	C-3
D433	H-4
D434	H-3
D435	A-6
D436	D-5
F401	B-2
F402	E-2
F408	L-2
F409	J-2
HS401	E-4
HS406	C-1
HS408	J-7
HS416	H-4
HS419	J-1
HS433	H-4
HS434	H-3
IC400	J-8
IC401	C-5
IC402	J-5
IC403	L-7
IC405	F-5
IC406	H-6
IC408	J-7
J402	L-2
J403	L-6
J408	A-2
J461A	A-2
J461B	A-2
J462	A-1
J467	L-4
J467A	M-4
J468	L-3
J469	A-4
L401	C-3
L405	A-5
L407	D-6
L408	L-5
L410	D-2
L412	H-2
L413	H-4
L415	H-1
L416	H-2
L417	H-1
L420	D-2
L421	B-2
L422	J-3
L423	L-6
L424	J-3
L425	L-1
L426	L-1
L427	H-4
L428	L-1
L429	H-3
L430	H-3
L432	J-2
L433	C-8
L435	L-1
L440	K-2
L467	L-4
Q400	M-3
Q401	E-3
Q402	D-6
Q403	M-2
Q404	D-5
R400	E-2
R401	C-7
R402	D-3
R404	H-1
R405	B-2
R406	C-3
R407	E-4
R408	E-4
R409	E-3
R411	K-4
R412	A-6
R413	B-7
R414	D-7
R415	C-7
R416	E-5
R417	F-5
R418	D-6
R419	E-5
R420	E-4
R421	B-7
R422	B-6
R423	B-6
R424	B-6
R425	F-5
R426	C-1
R427	M-3
R428	L-3
R429	M-3
R430	C-6
R431	M-2
R432	A-2
R433	M-2
R435	A-6
R438	H-8
R439	J-8
R440	H-8
R441	D-5
R442	K-7
R443	J-7
R444	L-8
R445	K-8
R446	M-7
R447	L-8
R448	K-6
R449	K-6
R450	L-4
R451	L-5
R452	K-5
R453	L-3
R454	L-4
R455	L-5
R456	H-5
R457	F-5
R458	H-8
R466	F-4
R469	D-8
R472	K-4
R476	E-2
R478	L-2
R483	C-3
R484	J-3
R485	J-4
R486	K-2
R487	F-6
R488	D-5
SA401	A-2
T401	F-3
T402	F-6
TP2	A-5
TP3	B-5
TP4	L-1
TP5	A-7
TP6	D-4
TP7	B-8
TP8	D-2
TP9	F-5
TP10	K-6
TP11	L-1
TP12	L-2
TP13	K-3
TP14	K-4
TP15	K-4
TP16	K-4
TP17	L-5
TP18	B-2
TP19	E-2
TP20	L-5
TP21	F-3
TP22	D-6
TP23	L-6
TP24	H-6
TP25	J-5
TP26	J-6
TP27	H-5
TP28	H-6
Z400	H-8

Component location guide - LSP - Section 2 & 3

COMPONENT GRID SCHEMATIC APD018 SECTION 2

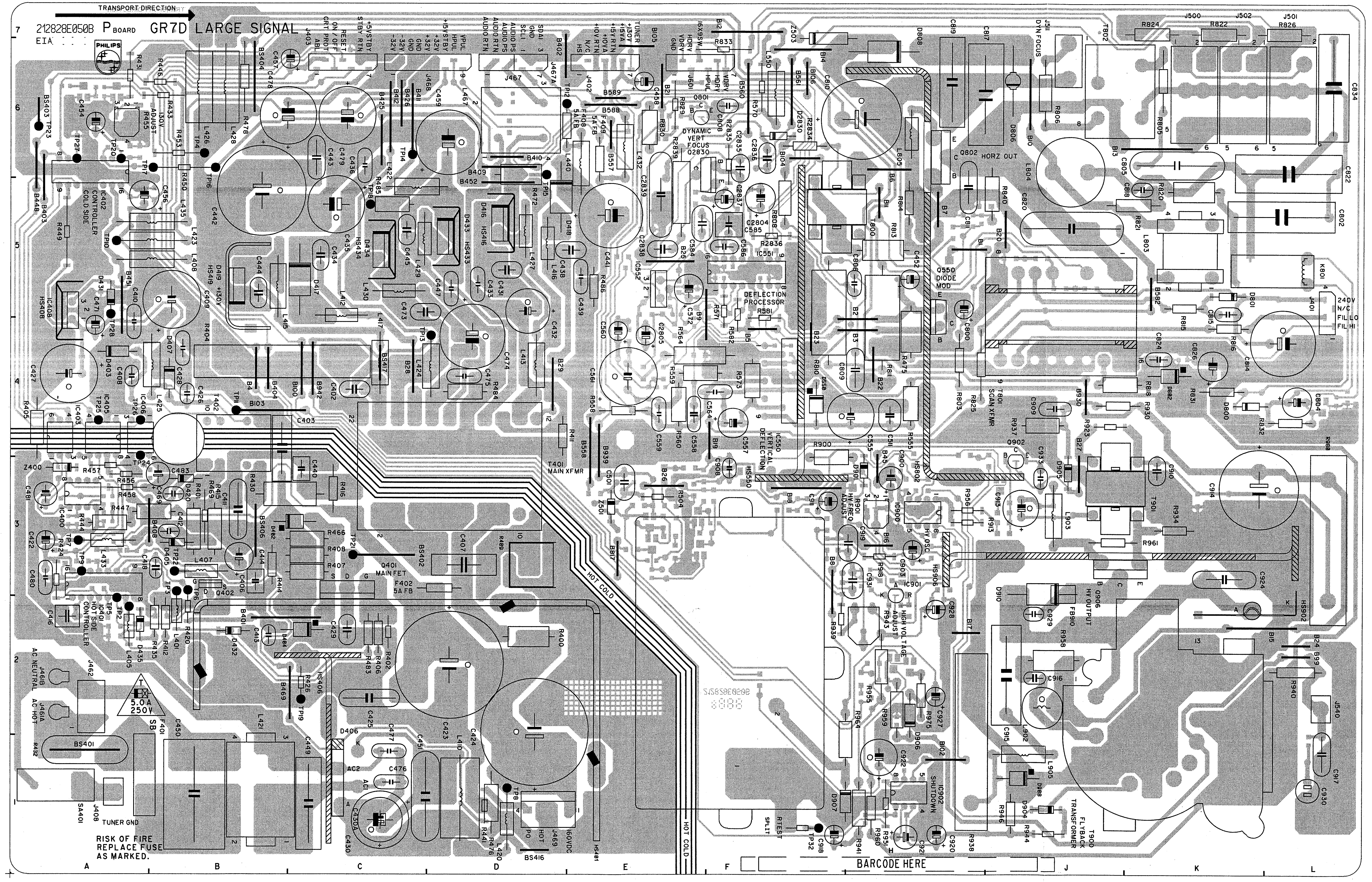
REF. DES.	SCH. ZONE
B1	E-2
B2	H-5
B3	E-6
B5	F-6
B7	F-4
B9	C-5
B10	J-5
B11	F-2
B12	D-5
B13	J-4
B14	C-6
B26	B-1
B104	F-4
B452	F-3
B558	D-3
B560	J-7
B561	D-5
B582	J-5
BR5	A-2
BR6	E-1
BR8	J-7
BR105	D-5
BR106	E-5
C452	H-5
C511	E-3
C555	D-3
C557	D-3
C558	C-3
C559	C-7
C560	A-7
C561	B-7
C564	D-3
C565	C-2
C567	C-3
C569	C-6
C570	B-2
C571	A-2
C572	A-2
C573	F-5
C580	D-6
C584	B-2
C585	C-2
C586	C-3
C587	A-4
C588	D-6
C800	F-2
C801	F-2
C802	K-7
C803	K-8
C804	J-8
C805	J-6
C806	F-3
C807	F-4
C808	F-4
C809	H-3
C810	J-4
C811	H-5
C812	J-8
C813	J-8
C814	H-2
C815	H-2
C817	J-5
C818	K-5
C819	J-5
C820	K-5
C822	K-5
C824	L-2
C826	M-2
C834	K-6
C2804	C-7
C2805	E-8
C2835	D-5
C2836	E-4
C2837	C-7
C2838	D-5
C2839	C-4
D550	D-2
D551	D-6
D571	A-1
D800	J-8
D801	H-2
D802	L-2
D806	J-5
D808	J-5
D2830	E-4
HS550	D-2
HS802	H-5
IC550	D-2
IC551	B-3
IC552	B-2
J401	H-1
J500	L-5
J501	L-6
J502	L-6
J511	L-7
J601	E-1
K801	J-7
L550	D-7
L803	K-5
L804	K-5
L805	H-4
Q550	H-5
Q551	F-6
Q800	F-2
Q801	E-4
Q802	H-4
Q803	E-5
Q804	J-8
Q2830	D-5
R475	J-5
R550	D-6
R554	C-3
R555	E-3
R558	D-4
R559	B-8
R560	B-7
R561	B-7
R562	A-7
R564	B-7
R565	A-7
R570	D-6
R571	C-5
R572	C-3
R573	D-3
R578	D-1
R581	F-5
R582	D-6
R583	D-6
R585	B-3
R586	A-5
R587	A-6
R588	B-2
R589	C-1
R800	F-3
R801	F-3
R802	H-3
R803	E-2
R805	J-6
R806	K-6
R807	E-5
R808	F-3
R809	E-4
R810	H-3
R811	H-4
R812	F-2
R813	F-4
R814	F-4
R815	H-3
R816	J-3
R817	E-3
R818	L-2
R820	J-7
R821	J-5
R822	L-5
R823	F-2
R824	L-6
R825	H-6
R826	L-7
R827	F-3
R828	H-2
R829	E-3
R830	F-5
R831	K-8
R832	J-8
R833	J-8
R840	J-4
R2810	D-8
R2812	C-8
R2834	E-4
R2835	B-7
R2836	C-7
R2837	D-5
R2838	D-5
R2839	D-4
T800	F-3
T801	L-2
T802	J-6
Z503	K-6

COMPONENT GRID SCHEMATIC APD018 SECTION 3

REF. DES.	SCH. ZONE
B4	K-6
B6	F-2
B8	H-6
B15	H-2
B16	D-5
B17	D-5
B18	E-4
B19	E-2
B20	F-4
B21	F-4
B22	H-4
B23	J-3
B24	H-5
B25	H-5
B27	F-3
B45	K-4
B99	D-4
B100	A-5
B102	J-6
B105	J-6
B817	B-6
B939	C-5
BR1	D-4
BR2	B-6
BR3	E-5
BR23	C-5
BR825	F-4
BR916	D-3
C501	C-5
C503	C-5
C900	A-3
C901	B-2
C902	C-2
C903	C-2
C904	D-2
C905	D-3
C906	D-3
C907	E-3
C908	E-2
C909	F-2
C910	F-4
C911	F-5
C913	H-3
C914	H-2
C915	H-3
C916	H-2
C917	K-4
C918	K-4
C919	H-6
C920	J-5
C921	H-5
C922	J-5
C923	H-5
C924	H-3
C927	L-4
C928	D-5
C929	H-3
C930	L-4
C931	J-6
C932	J-6
C933	F-3
D501	C-5
D502	C-5
D503	C-5
D504	D-5
D505	D-6
D900	D-5
D901	F-4
D904	K-5
D905	F-2
D906	L-4
D907	K-2
D908	H-3
D909	F-4
D910	H-3
D911	A-4
FB910	H-3
GTEST1	K-8
GTEST2	K-8
HS902	H-3
HS906	J-4
IC900	C-3
IC901	H-5
IC902	J-5
J540	K-3
L902	J-2
L903	H-3
L905	H-3
Q500	B-5
Q501	B-5
Q502	C-7
Q503	C-7
Q900	D-2
Q901	E-3
Q902	E-3
Q903	E-5
Q904	E-4
Q906	H-4
Q907	C-4
Q908	C-4
R500	B-5
R501	B-6
R503	B-5
R504	C-5
R505	D-5
R506	C-6
R507	D-6
R508	B-6
R510	C-5
R511	B-7
R512	C-6
R513	C-7
R514	C-6
R900	A-2
R901	B-3
R902	B-3
R904	D-5
R905	B-2
R906	C-2
R907	D-2
R908	D-2
R909	A-3
R910	E-2
R911	D-3
R912	D-5
R913	D-2
R914	E-2
R915	E-3
R916	D-3
R917	D-4
R918	E-5
R919	E-5
R920	F-5
R921	E-5
R922	E-3
R923	F-3
R924	F-5
R926	F-5
R927	F-4
R928	B-3
R930	F-2
R931	F-5
R932	H-6
R933	F-5
R934	H-4
R937	F-2
R938	H-2
R939	F-6
R940	L-6
R941	K-4
R942	H-6
R943	H-6
R944	K-5
R945	J-5
R946	J-5
R947	J-6
R948	K-4
R949	J-5
R950	K-5
R951	K-5
R952	H-3
R954	E-5
R955	B-4
R956	D-3
R957	E-3
R958	H-2
R959	D-4
R960	C-3
R961	H-4
R964	K-2
R965	K-2
R967	B-4
R968	B-4
R969	C-4
R970	L-3
R971	E-4
R975	C-4
R980	F-3
RTEST	J-8
SPLIT	L-3
T900	J-3
T901	F-4
TP32	J-8
Z500	B-6
Z501	D-5
Z901	A-4

Large signal panel

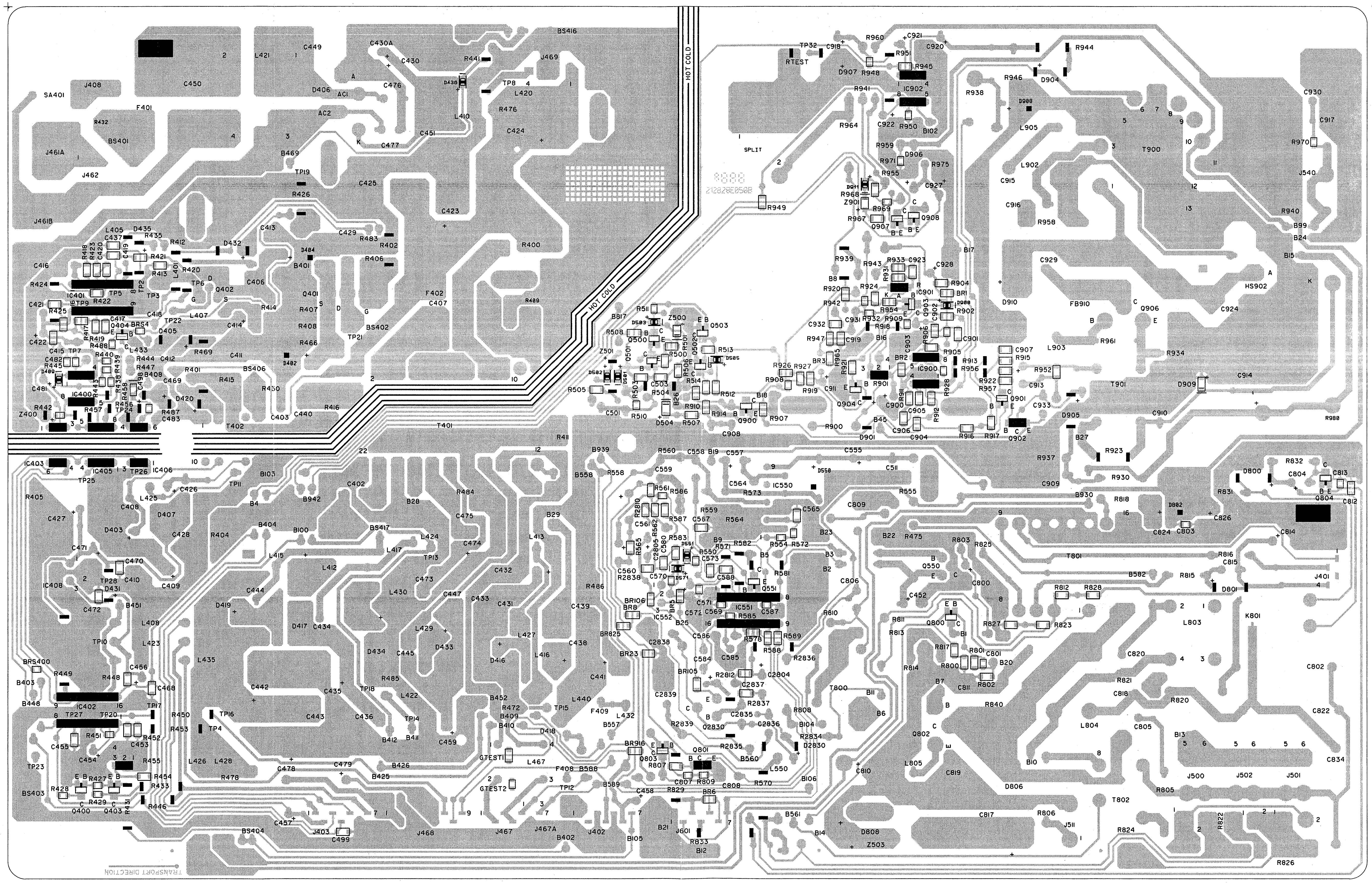
TOP VIEW


TRANSPORT DIRECTION
212828E050B
P BOARD
GR7D LARGE SIGNAL
EIA
PHILIPS
IC402 CONTROLLER COLD SIDE
IC401 HOT SIDE CONTROLLER
130V ADJUST
DYNAMIC VERT FOCUS Q2830
DEFLECTION PROCESSOR
IC550 VERTICAL DEFLECTION
HORZ OUT
Q550 DIODE MOD
T801 SCAN XFMR
T401 MAIN XFMR
Q401 MAIN FET
F402 5A FB
HOT
COLD
HOT COLD
J511 DYN FOCUS
240V N/C FIL LO FIL HI
H.V. FREQ ADJUST
H.V. OSC
H.V. OUTPUT
HIGH VOLTAGE ADJUST
IC902 SHUTDOWN
T900 FLYBACK TRANSFORMER
160VDC
AC NEUTRAL
AC HOT
5.0A 250V SB
TUNER GND
RISK OF FIRE REPLACE FUSE AS MARKED.
BARCODE HERE
A
B
C
D
E
F
J
K
L
1
2
3
4
5
6
7

2128comp.AI
171297

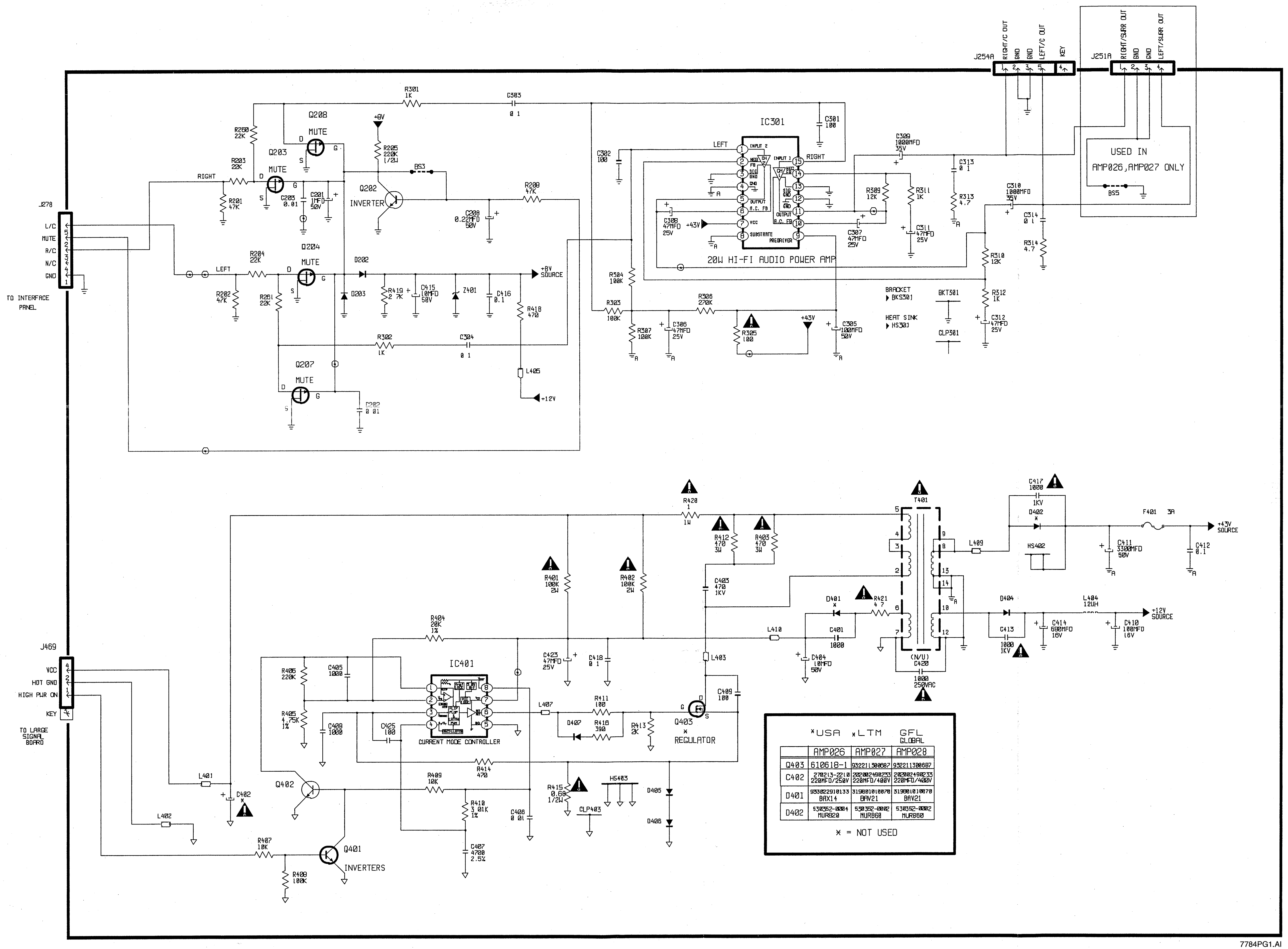
Large signal panel

BOTTOM VIEW



2128SMD.AI
171297

25W AMP panel



J254A
RIGHT/C OUT
GND
GND
LEFT/C OUT
KEY
J251A
RIGHT/SURR OUT
GND
GND
LEFT/SURR OUT
USED IN
AMP026,AMP027 ONLY
BS5
R301 1K
C303 0 1
Q208
MUTE
Q203
MUTE
+8V
R205 220K 1/2W
BS3
R260 22K
R203 22K
RIGHT
R201 47K
C203 0.01
C201 1MFD 50V
Q202
INVERTER
R200 47K
C208 0.22MFD 50V
J278
L/C
MUTE
R/C
N/C
GND
TO INTERFACE PANEL
Q204
MUTE
LEFT
R204 22K
R202 47K
R201 22K
D202
D203
R419 2 7K
C415 10MFD 50V
Z401
C416 0.1
+8V SOURCE
R418 470
R302 1K
C304 0 1
L405
+12V
Q207
MUTE
C202 0 01
IC301
C301 100
C302 100
LEFT
RIGHT
INPUT 2
INPUT 1
NEG FB
SIG GND
OUTPUT B.C. FB
VCC
SUBSTRATE
PREDRIVER
C308 47MFD 25V
+43V
20W HI-FI AUDIO POWER AMP
C309 1000MFD 35V
C313 0 1
R313 4.7
R309 12K
R311 1K
C307 47MFD 25V
C311 47MFD 25V
C310 1000MFD 35V
C314 0 1
R314 4.7
R310 12K
R312 1K
C312 47MFD 25V
R304 100K
R303 100K
R306 270K
R307 100K
C306 47MFD 25V
R305 100
+43V
C305 100MFD 50V
BRACKET
BKS301
HEAT SINK
HS301
BKT301
CLP301
R420 1 1W
R412 470 3W
R403 470 3W
R401 100K 2W
R402 100K 2W
C403 470 1KV
T401
C417 1000 1KV
D402 ×
F401 3A
+43V SOURCE
L409
HS402
C411 3300MFD 50V
C412 0.1
D401 ×
R421 4 7
D404
L404 12UH
+12V SOURCE
L410
C401 1000
C404 10MFD 50V
C413 1000 1KV
C414 680MFD 16V
C410 100MFD 16V
(N/U) C420
1000 250VAC
R404 20K 1%
IC401
CURRENT MODE CONTROLLER
R406 220K
C405 1000
C423 47MFD 25V
C418 0 1
J469
VCC
HOT GND
HIGH PWR ON
KEY
TO LARGE SIGNAL BOARD
R405 4.75K 1%
C408 1000
C425 100
L407
R411 100
D407
R416 390
R413 2K
Q403 × REGULATOR
C409 100
L403
R414 470
L401
C402 ×
Q402
R409 10K
R410 3 01K 1%
C406 0 01
R415 0.68 1/2W
HS403
CLP403
D405
D406
L402
R407 10K
Q401
INVERTERS
R408 100K
C407 4700 2.5%

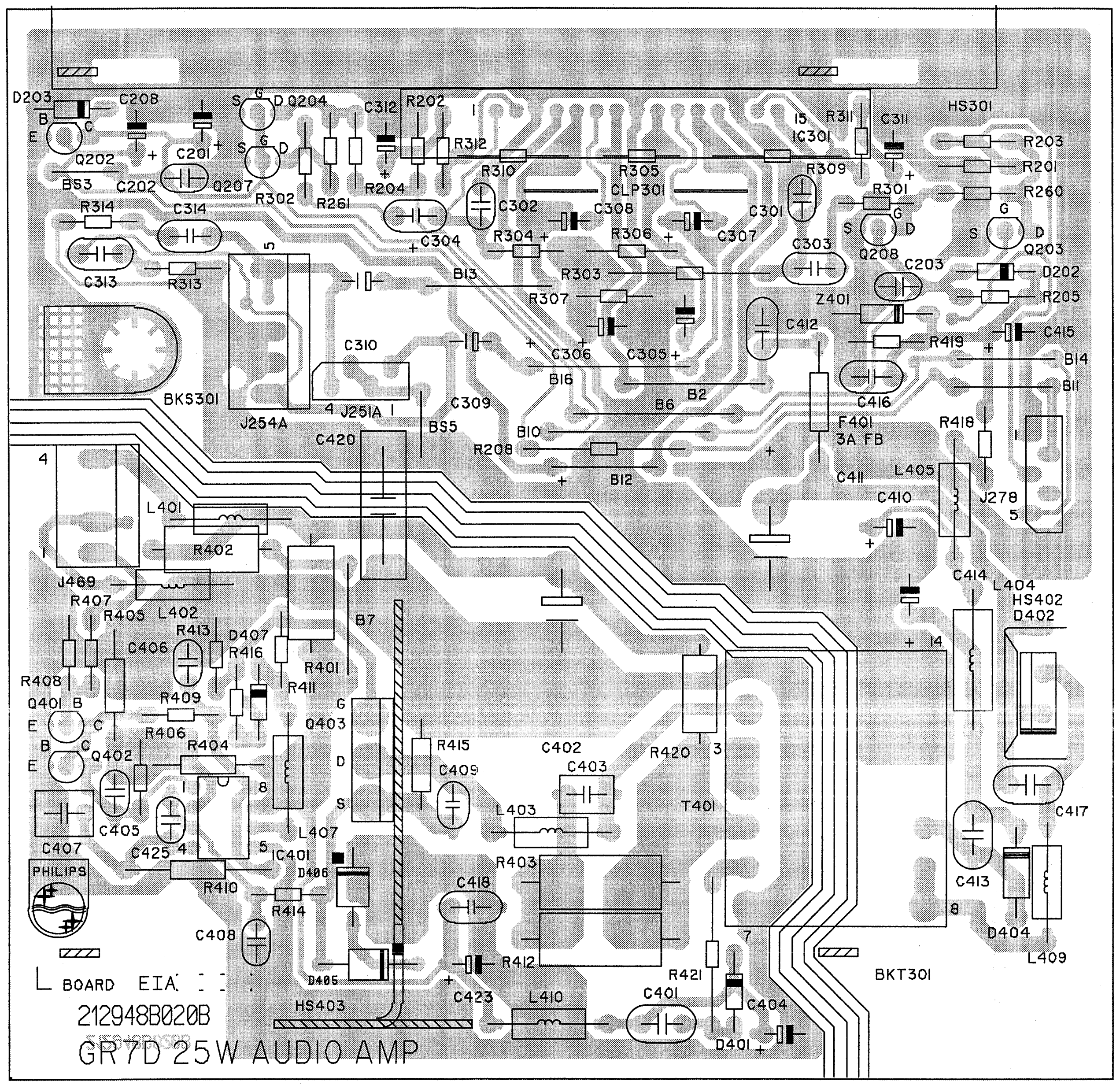
*USA *LTM GFL
GLOBAL

	AMP026	AMP027	AMP028
Q403	610618-1	932211300687	932211300687
C402	270213-2210 220MFD/250V	202002490233 220MFD/400V	202002490233 220MFD/400V
D401	933022910133 BAX14	319801010070 BAV21	319801010070 BAV21
D402	530352-0004 MUR820	530352-0002 MUR860	530352-0002 MUR860

* = NOT USED

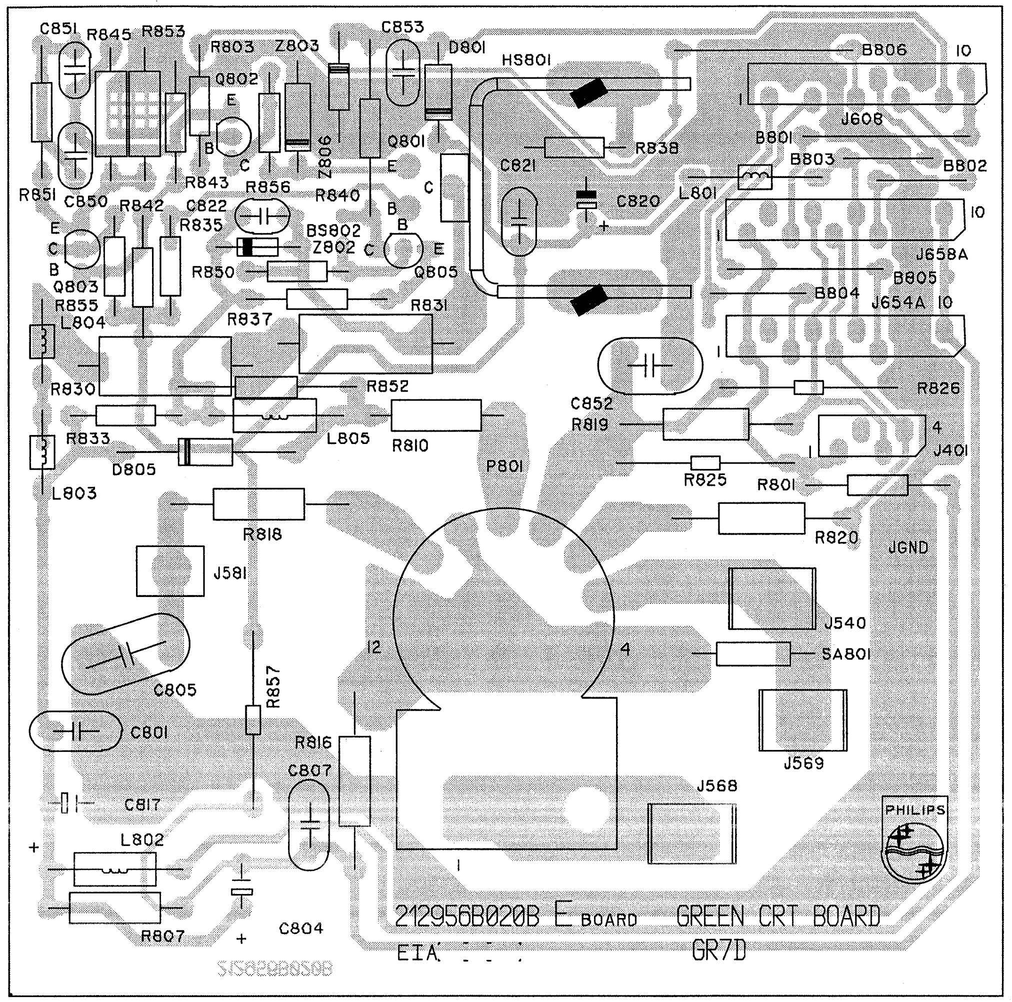
7784PG1.AI
231097

25W AMP panel


D203
C208
Q204
C312
R202
IC301
R311
C311
HS301
R312
R203
R201
R260
Q202
C201
Q207
R302
R261
R204
R310
R305
CLP301
R309
R301
BS3
C202
R314
C314
C302
C308
C301
Q203
Q208
C304
R304
R306
C307
C303
C313
R313
B13
R303
C203
D202
R307
Z401
R205
C412
R419
C415
C310
C306
C305
B16
B14
B11
BKS301
J254A
J251A
C309
B6
B2
C416
F401
3A FB
C420
BS5
B10
R208
B12
R418
C411
L405
C410
J278
L401
R402
J469
R407
R405
L402
R413
D407
R416
C406
R408
R401
R411
Q401
R409
Q403
R406
R404
Q402
C405
C407
C425
L407
IC401
R410
R414
C408
D406
HS403
D405
C423
R412
L410
C401
R421
C404
D401
BKT301
L409
D404
C413
C417
T401
R420
C402
C403
R415
C409
L403
R403
C418
B7
C414
L404
HS402
D402
PHILIPS
L BOARD EIA
212948B020B
GR7D 25W AUDIO AMP

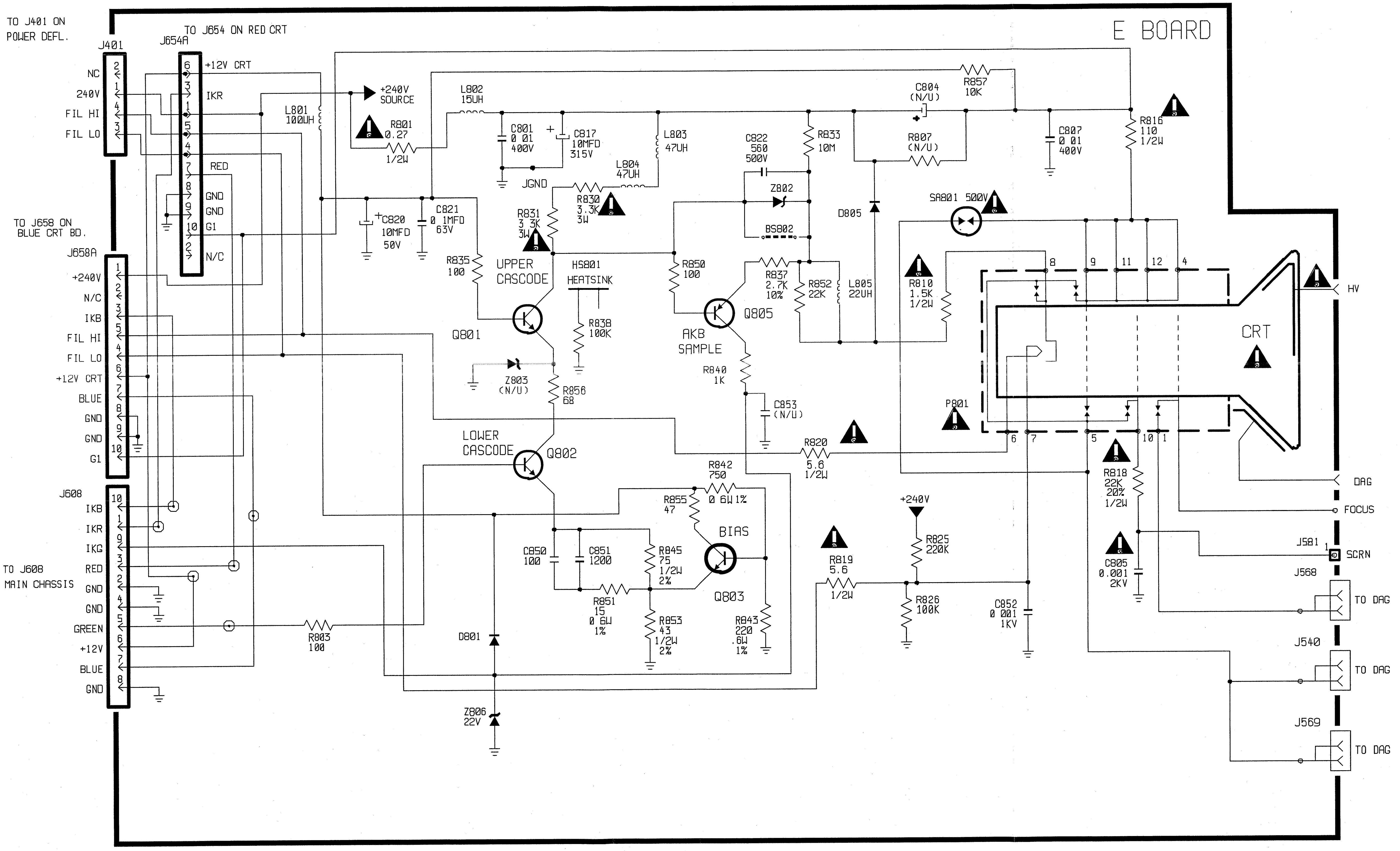
2948COMP.AI
221097

Green CRT panel

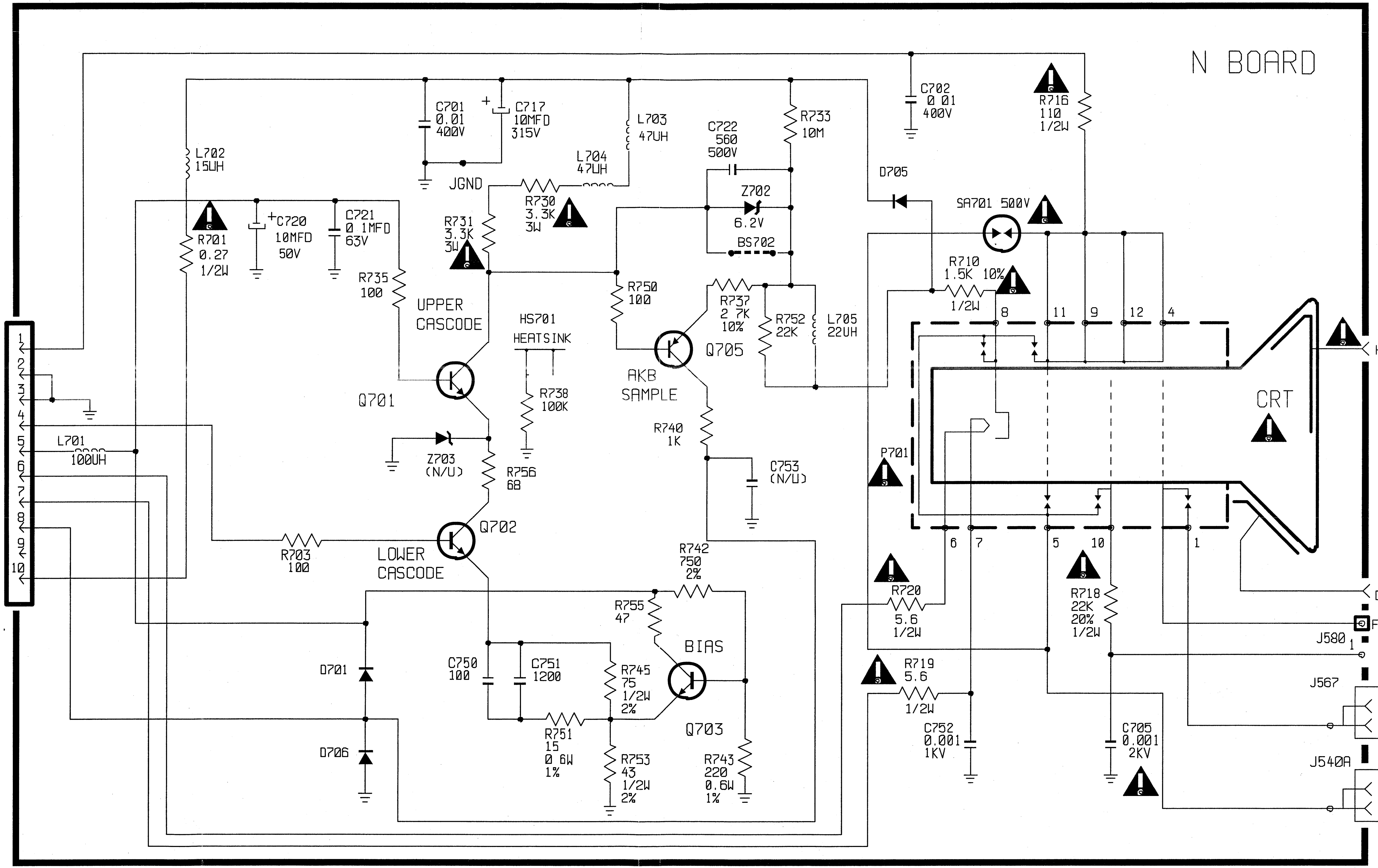

C851
R845
R853
R803
Z803
C853
D801
HS801
B806
J608
Q802
Q801
Z806
R838
B801
B803
B802
R851
C850
R842
C822
R843
R856
R840
C821
C820
L801
R835
BS802
Z802
J658A
Q803
R850
Q805
B805
R855
B804
J654A
L804
R837
R831
R830
R852
C852
R826
R819
J401
R833
L805
R810
D805
P801
R825
R801
L803
R818
R820
JGND
J581
J540
SA801
C805
R857
C801
R816
C807
J569
J568
C817
L802
R807
C804
PHILIPS
212956B020B E BOARD
GREEN CRT BOARD
GR7D
EIA

2956COMP.AI
221097

Green CRT panel

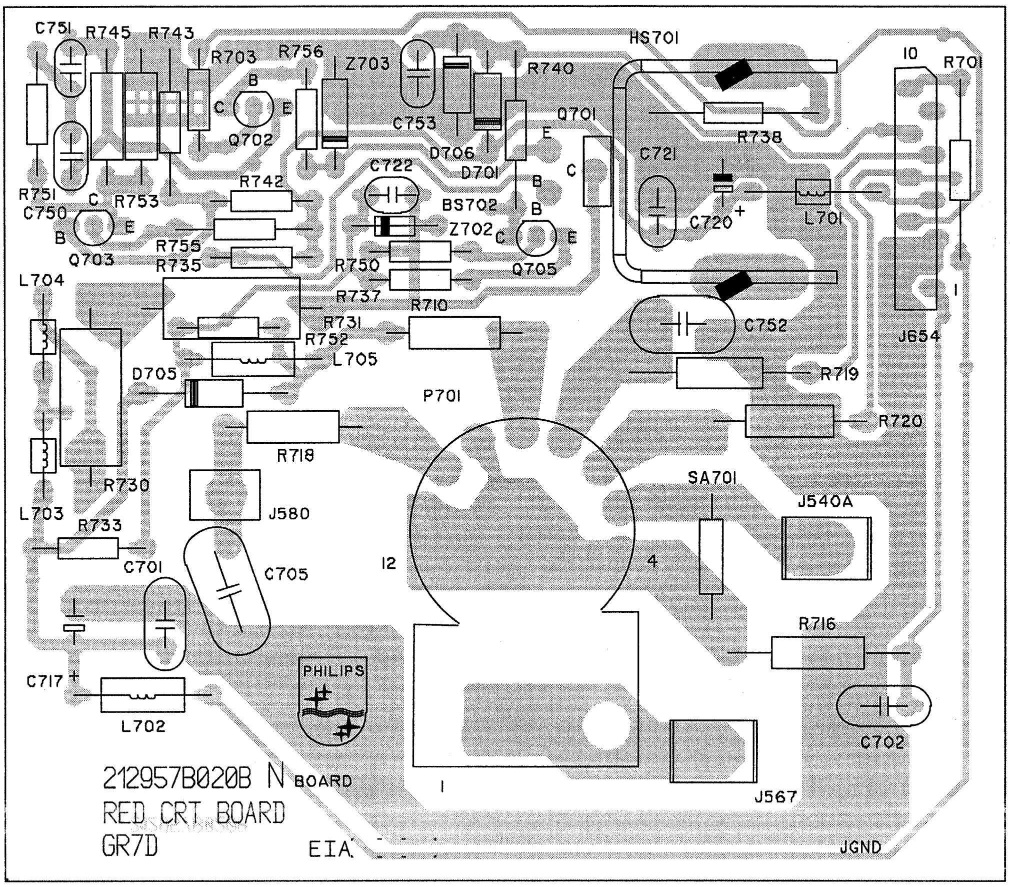

E BOARD
TO J401 ON POWER DEFL.
J401
NC
240V
FIL HI
FIL LO
TO J654 ON RED CRT
J654A
+12V CRT
IKR
RED
GND
GND
G1
N/C
TO J658 ON BLUE CRT BD.
J658A
+240V
N/C
IKB
FIL HI
FIL LO
+12V CRT
BLUE
GND
GND
G1
J608
IKB
IKR
IKG
RED
GND
GND
GREEN
+12V
BLUE
GND
TO J608 MAIN CHASSIS
+240V SOURCE
R801 0.27 1/2W
L801 100UH
L802 15UH
C801 0.01 400V
C817 10MFD 315V
JGND
L803 47UH
L804 47UH
C820 10MFD 50V
C821 0.1MFD 63V
R831 3.3K 3W
R830 3.3K 3W
R835 100
UPPER CASCODE
Q801
Z803 (N/U)
R856 68
HS801 HEATSINK
R838 100K
LOWER CASCODE
Q802
C822 560 500V
Z802
BS802
R833 10M
R850 100
R837 2.7K 10%
R852 22K
L805 22UH
Q805
AKB SAMPLE
R840 1K
C853 (N/U)
D805
C804 (N/U)
R857 10K
R807 (N/U)
C807 0.01 400V
R816 110 1/2W
SA801 500V
R810 1.5K 1/2W
P801
CRT
HV
R820 5.6 1/2W
R842 750 0.6W 1%
R855 47
BIAS
Q803
C850 100
C851 1200
R845 75 1/2W 2%
R851 15 0.6W 1%
R853 43 1/2W 2%
R843 220 .6W 1%
R803 100
D801
Z806 22V
+240V
R825 220K
R826 100K
R819 5.6 1/2W
C852 0.001 1KV
R818 22K 20% 1/2W
C805 0.001 2KV
DAG
FOCUS
J581
SCRN
J568
TO DAG
J540
TO DAG
J569
TO DAG
8
9
11
12
4
6
7
5
10
1
7791PG1.AI
231097

Red CRT panel


N BOARD
J654
G1
GND
GND
RED
+12V
FIL HI
FIL LO
IKR
N/C
240V
1
2
3
4
5
6
7
8
9
10
TO J654A ON GRN. CRT BD.
L701 100UH
L702 15UH
R701 0.27 1/2W
C720 10MFD 50V
C721 0.1MFD 63V
R735 100
C701 0.01 400V
C717 10MFD 315V
JGND
L703 47UH
L704 47UH
R730 3.3K 3W
R731 3.3K 3W
UPPER CASCODE
Q701
HS701 HEATSINK
R738 100K
Z703 (N/U)
R756 68
Q702
LOWER CASCODE
R703 100
C722 560 500V
Z702 6.2V
BS702
R733 10M
R750 100
R737 2.7K 10%
R752 22K
L705 22UH
Q705
AKB SAMPLE
R740 1K
C753 (N/U)
R742 750 2%
R755 47
BIAS
R745 75 1/2W 2%
Q703
C750 100
C751 1200
R751 15 0.6W 1%
R753 43 1/2W 2%
R743 220 0.6W 1%
D701
D706
C702 0.01 400V
R716 110 1/2W
D705
SA701 500V
R710 1.5K 10% 1/2W
8
11
9
12
4
HV
CRT
P701
6
7
5
10
1
R720 5.6 1/2W
R718 22K 20% 1/2W
R719 5.6 1/2W
C752 0.001 1KV
C705 0.001 2KV
DAG
FOCUS
J580
1
SCRN
J567
TO DAG
J540A
TO DAG

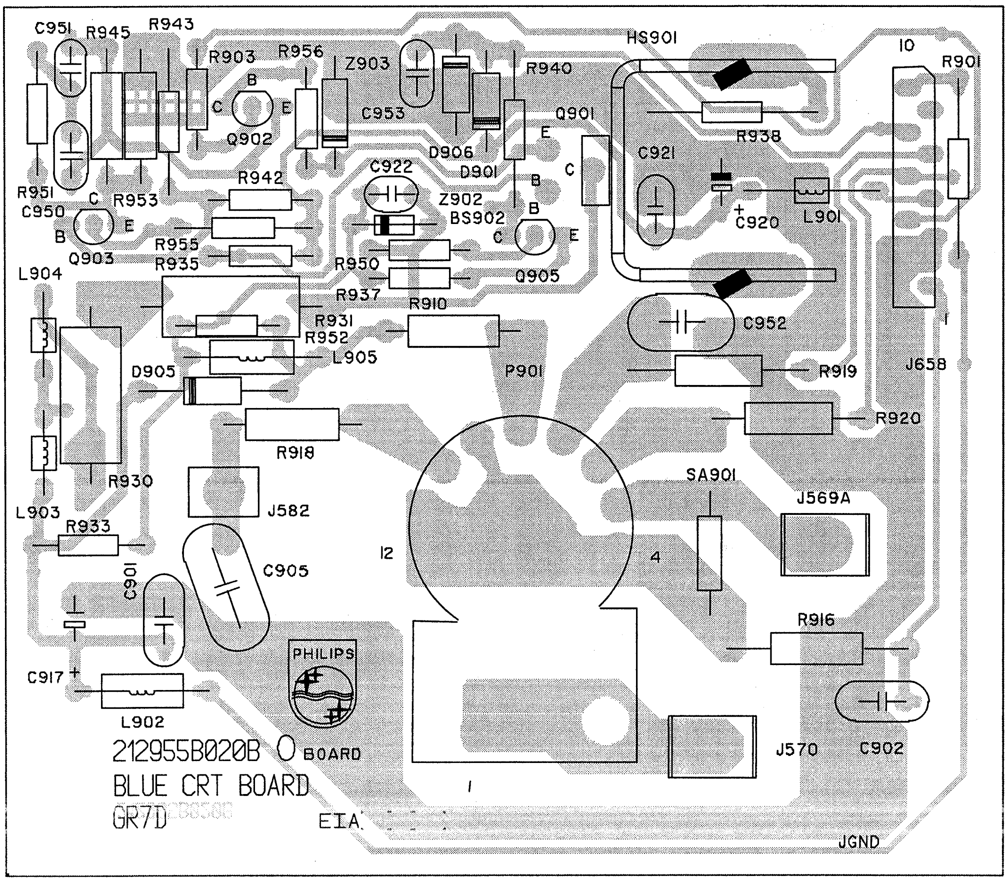
7792PG1.AI
231097

Red CRT panel


C751
R745
R743
R703
R756
Z703
HS701
10
R701
B
C
E
Q702
C753
R740
Q701
E
R738
D706
D701
C721
C722
B
C
R751
R742
C
R753
BS702
C720
L701
C750
B
E
Z702
C
B
E
R755
Q703
R735
R750
Q705
L704
R737
R731
R710
C752
R752
J654
L705
D705
R719
P701
R720
R718
R730
SA701
L703
J580
J540A
R733
C701
C705
12
4
R716
C717
PHILIPS
C702
L702
212957B020B N BOARD
RED CRT BOARD
GR7D
J567
EIA
JGND

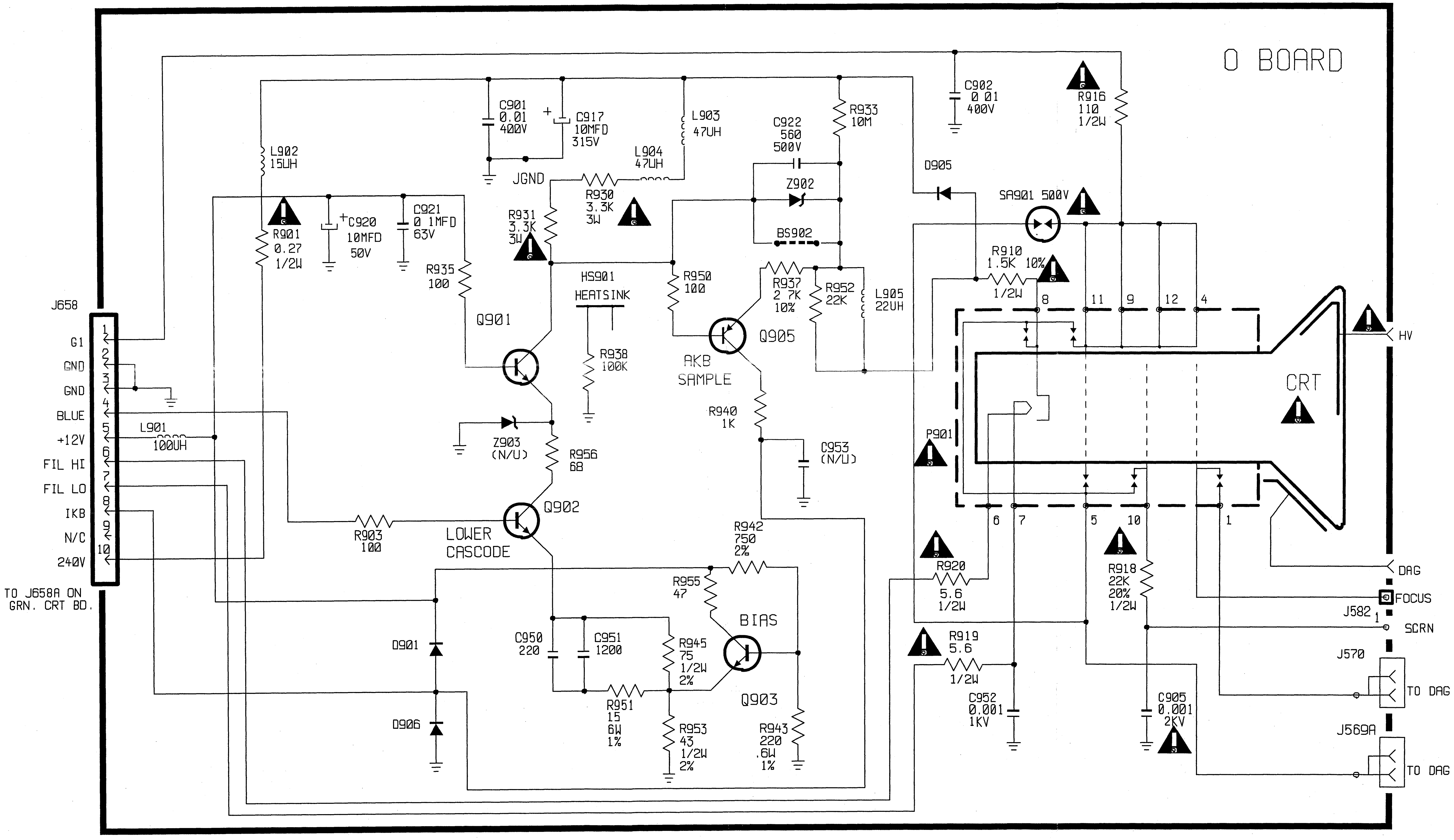
2957COMP.AI
221097

Blue CRT panel


C951
R945
R943
R903
R956
Z903
C953
R940
HS901
10
R901
B
C
E
Q902
Q901
E
D906
D901
C
C921
R938
R951
C950
C
R953
R942
C922
Z902
BS902
B
B
C
E
C920
L901
B
E
Q903
R955
R935
R950
Q905
L904
R937
R910
R931
R952
C952
L905
D905
P901
R919
J658
R920
R918
R930
SA901
J569A
L903
J582
R933
12
4
C905
C901
R916
C917
L902
PHILIPS
J570
C902
212955B020B
0 BOARD
BLUE CRT BOARD
GR7D
EIA
JGND
1

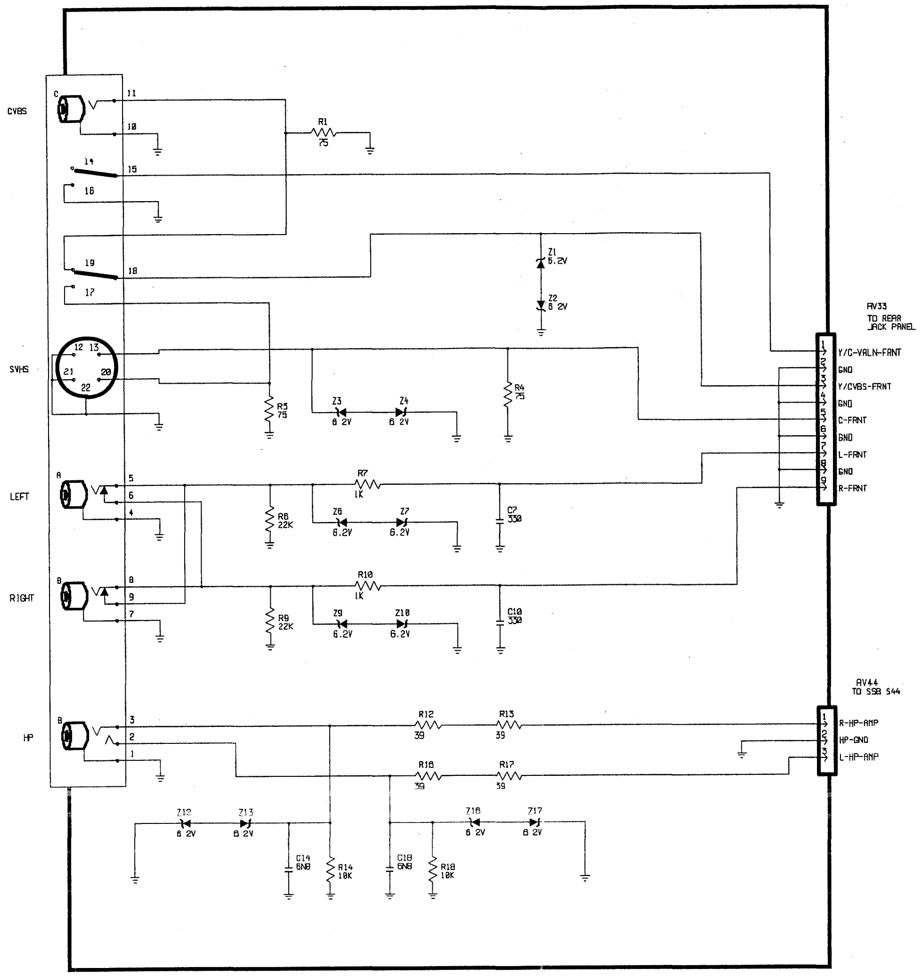
2955COMP.AI
221097

Blue CRT panel

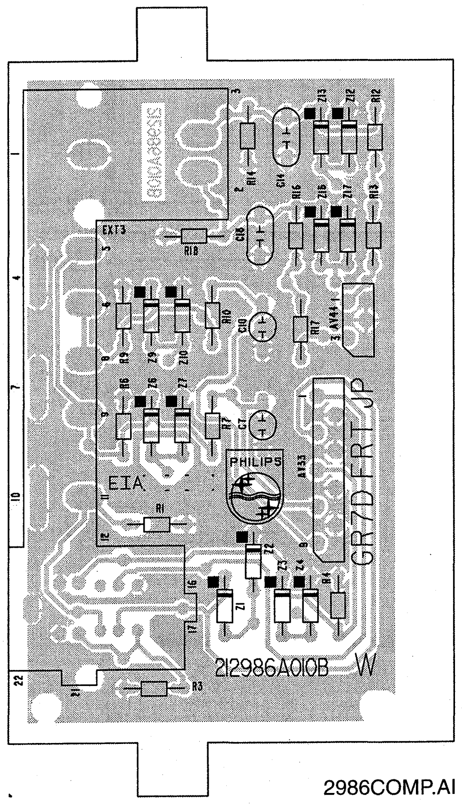

O BOARD
J658
1 G1
2 GND
3 GND
4 BLUE
5 +12V
6 FIL HI
7 FIL LO
8 IKB
9 N/C
10 240V
TO J658A ON GRN. CRT BD.
L901 100UH
L902 15UH
R901 0.27 1/2W
C920 10MFD 50V
C921 0 1MFD 63V
R935 100
C901 0.01 400V
C917 10MFD 315V
JGND
L903 47UH
L904 47UH
R930 3.3K 3W
R931 3.3K 3W
Q901
HS901 HEATSINK
R938 100K
Z903 (N/U)
R956 68
Q902
LOWER CASCODE
R903 100
D901
D906
C950 220
C951 1200
R945 75 1/2W 2%
R951 15 6W 1%
R953 43 1/2W 2%
R955 47
R942 750 2%
BIAS
Q903
R943 220 .6W 1%
C922 560 500V
Z902
BS902
R933 10M
R950 100
Q905
AKB SAMPLE
R937 2 7K 10%
R952 22K
L905 22UH
R940 1K
C953 (N/U)
C902 0 01 400V
D905
SA901 500V
R916 110 1/2W
R910 1.5K 10% 1/2W
8 11 9 12 4
CRT
HV
P901
6 7 5 10 1
R920 5.6 1/2W
R918 22K 20% 1/2W
R919 5.6 1/2W
C952 0.001 1KV
C905 0.001 2KV
DAG
FOCUS
J582 1
SCRN
J570 TO DAG
J569A TO DAG

7789PG1.AI
231097

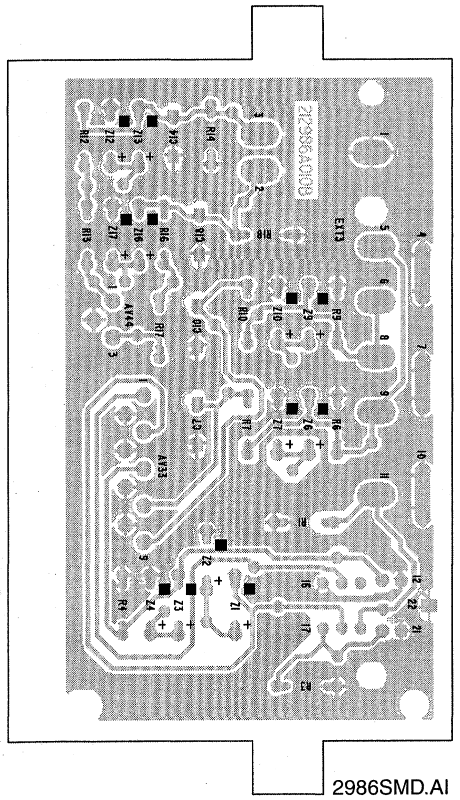
Customer control board


CVBS
SVHS
LEFT
RIGHT
HP
R1 75
Z1 6.2V
Z2 6.2V
R3 75
R4 75
Z3 6.2V
Z4 6.2V
R7 1K
R6 22K
Z6 6.2V
Z7 6.2V
C7 330
R10 1K
R9 22K
Z9 6.2V
Z10 6.2V
C10 330
R12 39
R13 39
R16 39
R17 39
Z12 6.2V
Z13 6.2V
Z16 6.2V
Z17 6.2V
C14 6N8
R14 10K
C18 6N8
R18 10K
AV33 TO REAR JACK PANEL
Y/C-VALN-FRNT
GND
Y/CVBS-FRNT
GND
C-FRNT
GND
L-FRNT
GND
R-FRNT
AV44 TO SSB S44
R-HP-AMP
HP-GND
L-HP-AMP

7809PG1.AI
231097

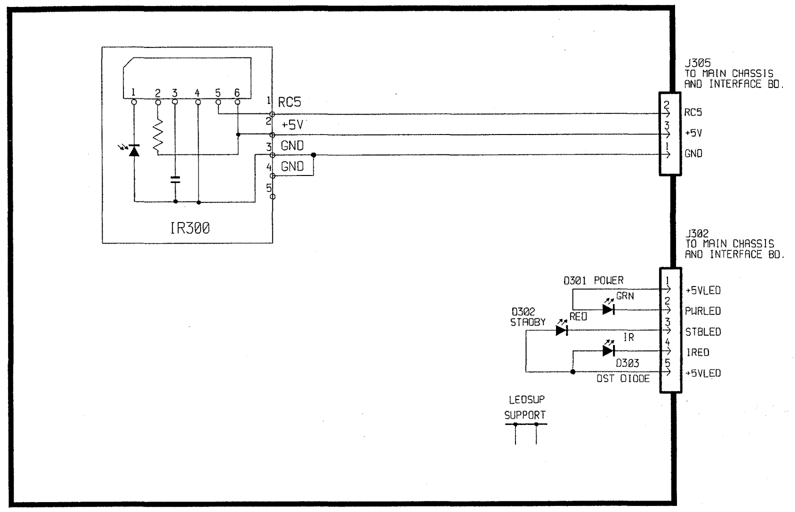

212986A010B
EXT3
EIA
PHILIPS
GR7DFRTJP
212986A010B W

2986COMP.AI
221097

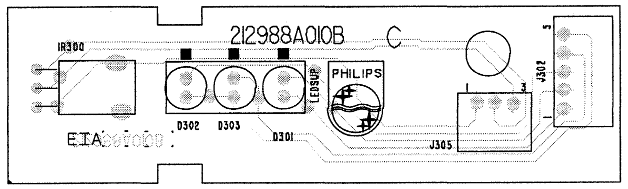

212986A010B
EXT3
AV44
AV33

2986SMD.AI
221097

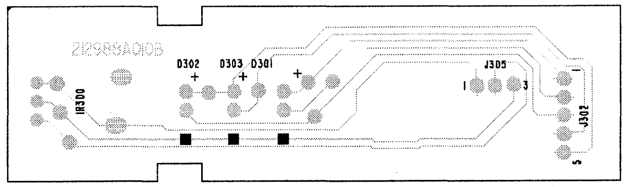
Remote receiver board


IR300
RC5
+5V
GND
GND
J305 TO MAIN CHASSIS AND INTERFACE BD.
RC5
+5V
GND
J302 TO MAIN CHASSIS AND INTERFACE BD.
D301 POWER
GRN
RED
D302 STNDBY
IR
D303 OST DIODE
LEDSUP SUPPORT
+5VLED
PWRLED
STBLED
IRED
+5VLED

7810PG1.AI
231097

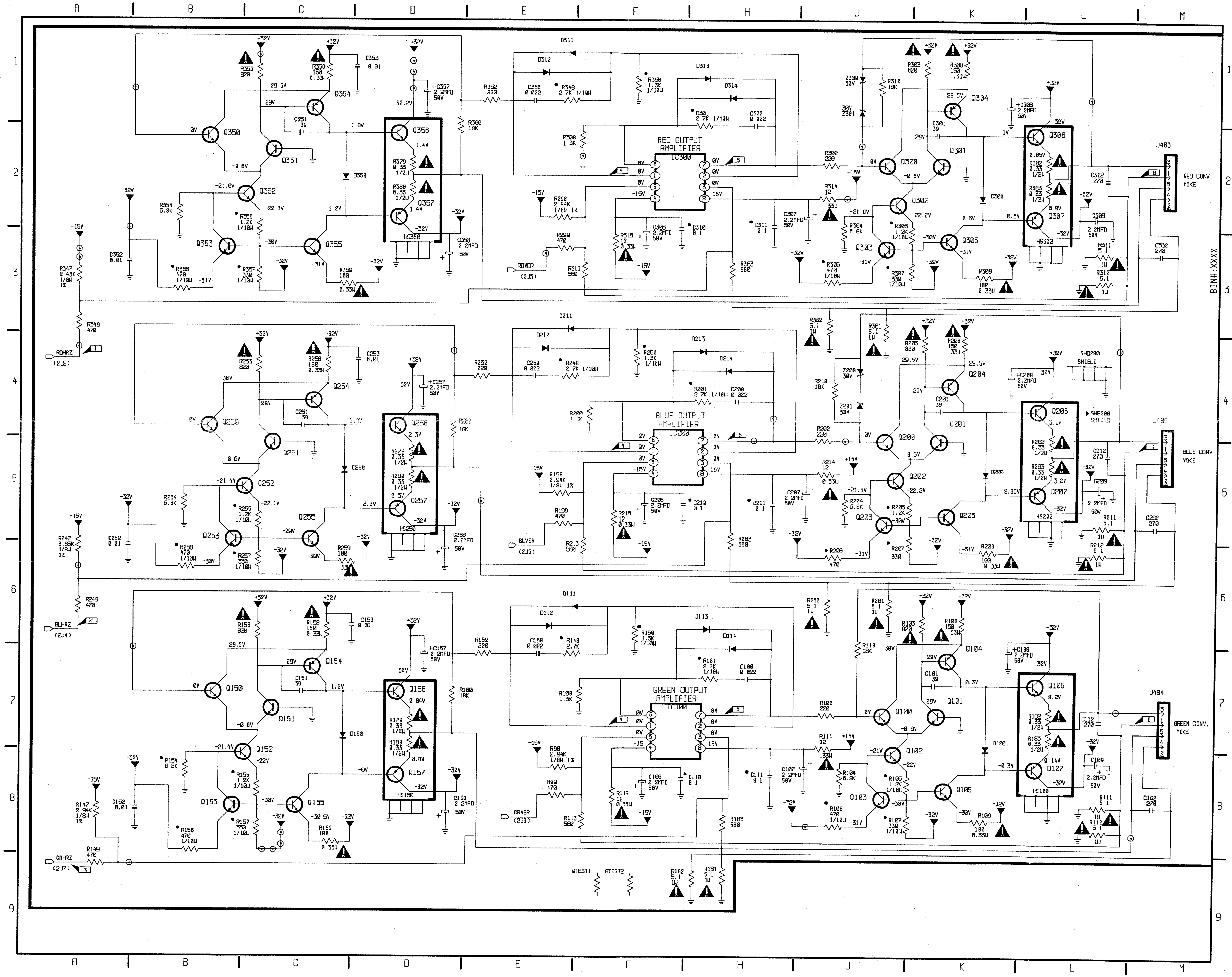

IR300
212988A010B C
PHILIPS
LEDSUP
D302
D303
D301
EIA
J305
J302

2988COMP.AI
221097

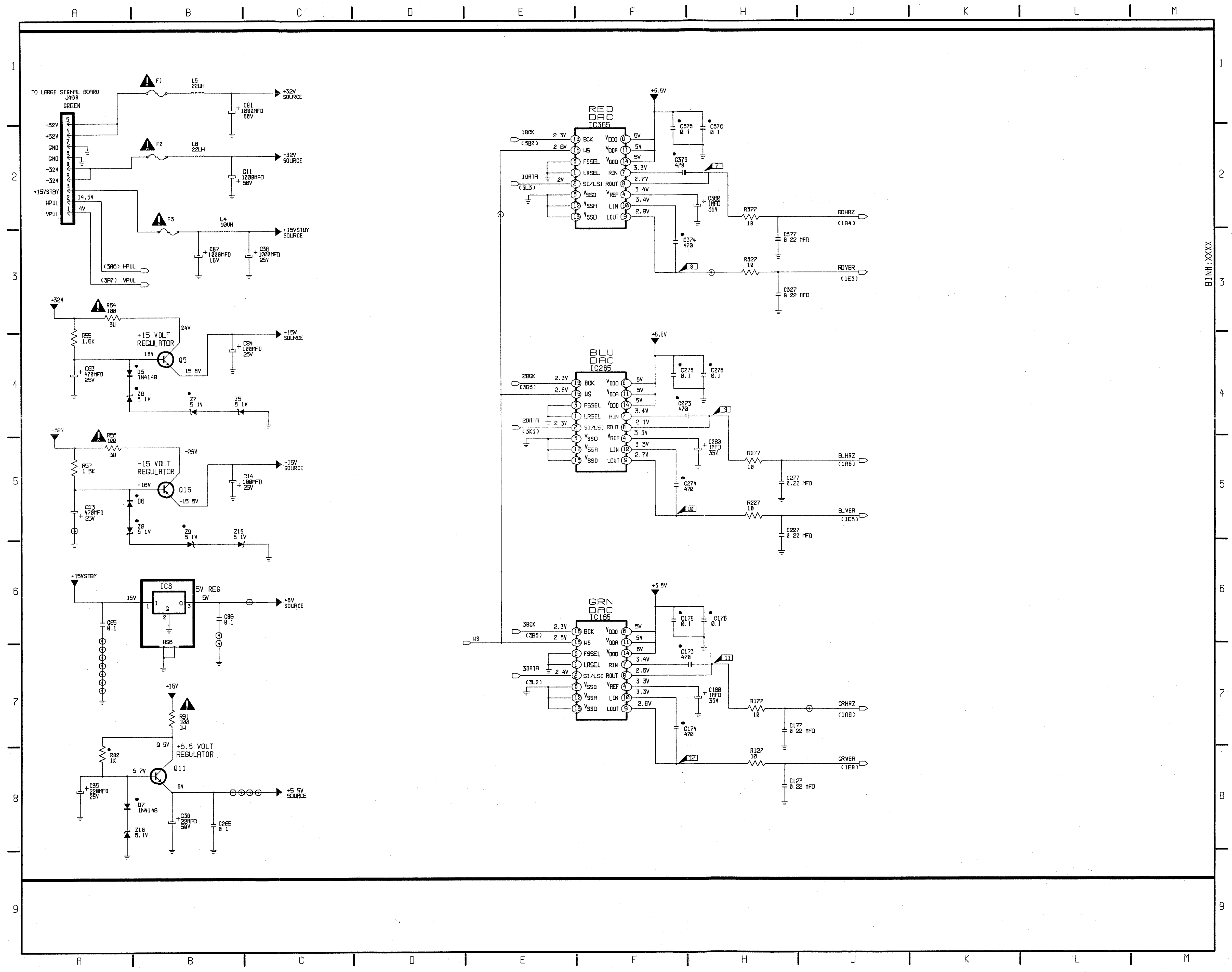

212988A010B
D302
D303
D301
IR300
J305
J302

2988SMD.AI
221097

Digital convergence panel - Section 1

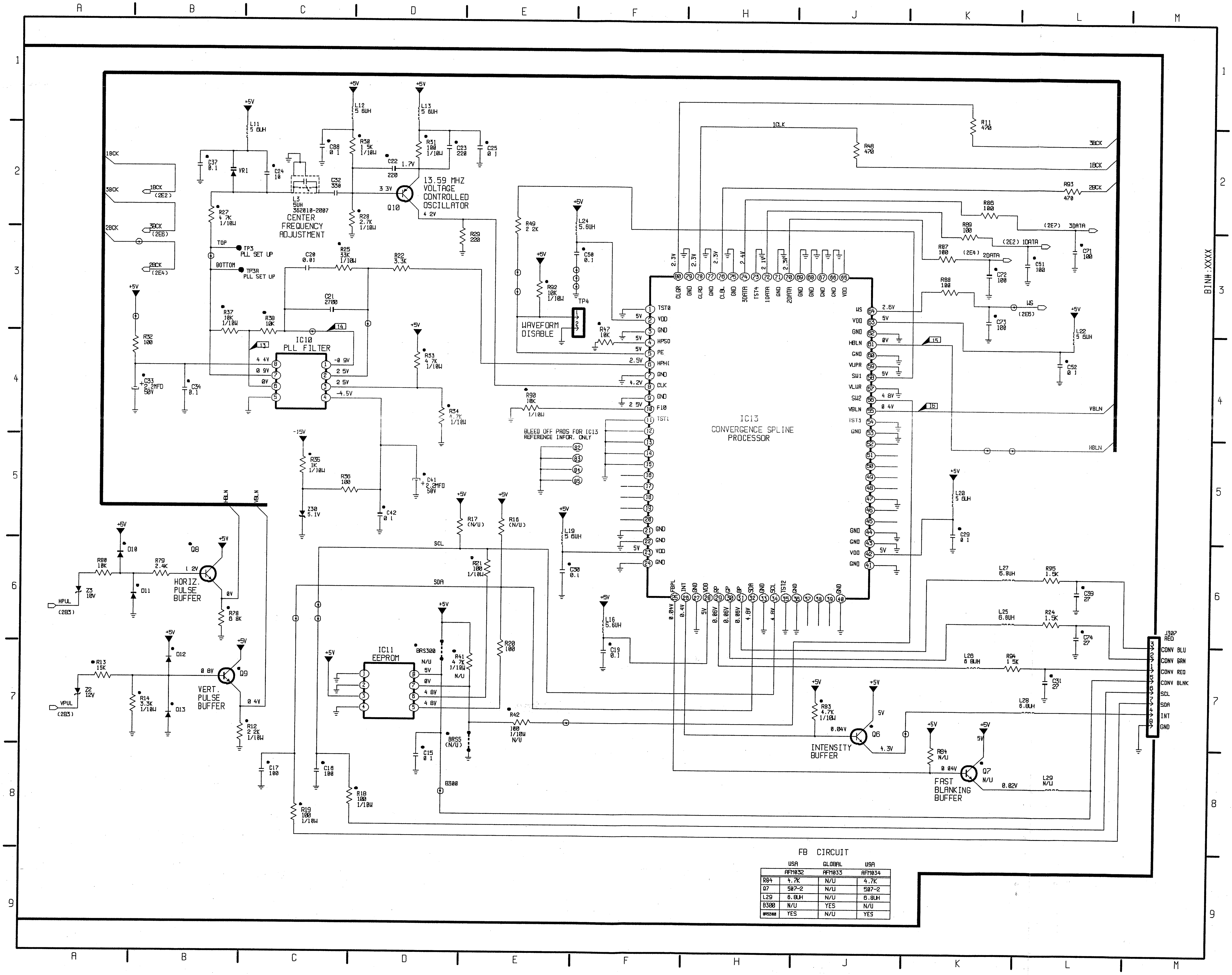

A
B
C
D
E
F
H
J
K
L
M
1
2
3
4
5
6
7
8
9
RED OUTPUT AMPLIFIER
IC300
BLUE OUTPUT AMPLIFIER
IC200
GREEN OUTPUT AMPLIFIER
IC100
J483
RED CONV. YOKE
J485
BLUE CONV YOKE
J484
GREEN CONV. YOKE
RDHRZ (2J2)
BLHRZ (2J4)
GRHRZ (2J7)
RDVER (2J3)
BLVER (2J5)
GRVER (2J8)
GTEST1
GTEST2
HS350
HS250
HS150
HS300
HS200
HS100
SH0200 SHIELD
Q350
Q351
Q352
Q353
Q354
Q355
Q356
Q357
Q300
Q301
Q302
Q303
Q304
Q305
Q306
Q307
Q250
Q251
Q252
Q253
Q254
Q255
Q256
Q257
Q200
Q201
Q202
Q203
Q204
Q205
Q206
Q207
Q150
Q151
Q152
Q153
Q154
Q155
Q156
Q157
Q100
Q101
Q102
Q103
Q104
Q105
Q106
Q107
+32V
-32V
+15V
-15V
BINH.XXXX
7702PG1.AI
231097

Digital convergence panel - Section 2


A
B
C
D
E
F
H
J
K
L
M
1
2
3
4
5
6
7
8
9
TO LARGE SIGNAL BOARD
J468
GREEN
+32V
+32V
GND
GND
-32V
-32V
+15VSTBY
HPUL
VPUL
14.5V
4V
F1
L5
22UH
+32V SOURCE
C81
1000MFD
50V
F2
L6
22UH
-32V SOURCE
C11
1000MFD
50V
F3
L4
10UH
+15VSTBY SOURCE
C87
1000MFD
16V
C38
1000MFD
25V
(3A6) HPUL
(3A7) VPUL
+32V
R54
100
3W
24V
R55
1.5K
+15 VOLT REGULATOR
16V
Q5
15 6V
+15V SOURCE
C84
100MFD
25V
C83
470MFD
25V
D5
1N4148
Z6
5 1V
Z7
5 1V
Z5
5 1V
-32V
R56
100
3W
-26V
R57
1 5K
-15 VOLT REGULATOR
-16V
Q15
-15 5V
-15V SOURCE
C14
100MFD
25V
C13
470MFD
25V
D6
Z8
5 1V
Z9
5 1V
Z15
5 1V
+15VSTBY
IC6
5V REG
15V
5V
I
G
O
1
2
3
+5V SOURCE
C85
0.1
C86
0.1
HS6
+15V
R91
100
1W
9 5V
+5.5 VOLT REGULATOR
R82
1K
5 7V
Q11
5V
+5 5V SOURCE
C35
220MFD
25V
D7
1N4148
Z10
5.1V
C36
22MFD
50V
C265
0 1
RED DAC
IC365
+5.5V
1BCK
(3B2)
2 3V
2 6V
1DATA
(3L3)
2V
BCK
WS
FSSEL
LRSEL
SI/LSI
VSSO
VSSA
VSSD
VDDO
VDDA
VDDD
RIN
ROUT
VREF
LIN
LOUT
5V
5V
5V
3.3V
2.7V
3 4V
3.4V
2.8V
C375
0 1
C376
0 1
C373
470
7
C380
1MFD
35V
R377
10
RDHRZ
(1A4)
C377
0 22 MFD
C374
470
8
R327
10
RDVER
(1E3)
C327
0 22 MFD
BLU DAC
IC265
+5.5V
2BCK
(3B3)
2.3V
2.6V
2DATA
(3K3)
2 3V
5V
5V
5V
3.4V
2.1V
3 3V
3 3V
2.7V
C275
0.1
C276
0.1
C273
470
9
C280
1MFD
35V
R277
10
BLHRZ
(1A6)
C277
0.22 MFD
C274
470
10
R227
10
BLVER
(1E5)
C227
0 22 MFD
GRN DAC
IC165
+5 5V
3BCK
(3B3)
2.3V
2 5V
WS
3DATA
(3L2)
2 4V
5V
5V
5V
3.4V
2.5V
3 3V
3.3V
2.8V
C175
0.1
C176
0.1
C173
470
11
C180
1MFD
35V
R177
10
GRHRZ
(1A8)
C177
0 22 MFD
C174
470
12
R127
10
GRVER
(1E8)
C127
0.22 MFD
BIN#:XXXX

7702PG2.AI
231097

Digital convergence panel - Section 3

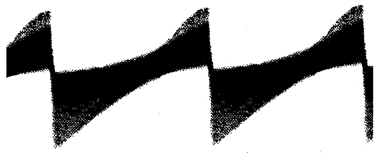

13.59 MHZ VOLTAGE CONTROLLED OSCILLATOR
Q10
L3 5UH 382010-2007
CENTER FREQUENCY ADJUSTMENT
TP3 PLL SET UP
TP3A PLL SET UP
TOP
BOTTOM
IC10 PLL FILTER
WAVEFORM DISABLE
TP4
BLEED OFF PADS FOR IC13 REFERENCE INFOR. ONLY
IC13 CONVERGENCE SPLINE PROCESSOR
Q8 HORIZ. PULSE BUFFER
HPUL (2B3)
Q9 VERT. PULSE BUFFER
VPUL (2B3)
IC11 EEPROM
BRS300
BRS5 (N/U)
B300
Q6 INTENSITY BUFFER
Q7 FAST BLANKING BUFFER
J307 RED
CONV BLU
CONV GRN
CONV RED
CONV BLNK
SCL
SDA
INT
GND
1BCK
2BCK
3BCK
1DATA
2DATA
3DATA
1CLK
WS
VBLN
HBLN
BIN#:XXXX
A
B
C
D
E
F
H
J
K
L
M
1
2
3
4
5
6
7
8
9

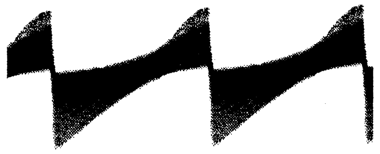
FB CIRCUIT

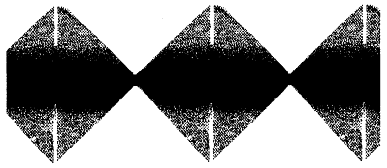
	USA AFM032	GLOBAL AFM033	USA AFM034
R84	4.7K	N/U	4.7K
Q7	507-2	N/U	507-2
L29	6.8UH	N/U	6.8UH
B300	N/U	YES	N/U
BRS300	YES	N/U	YES

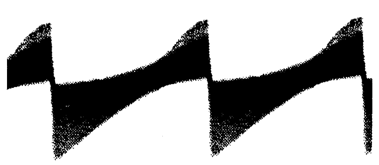
7702PG3.AI
231097

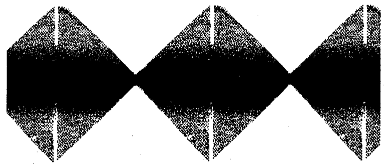
Wave forms Digital convergence panel

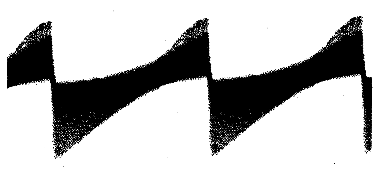

1 **1.2Vp-p 5mSec.**

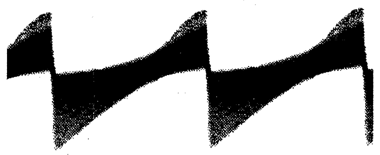

2 **1.1Vp-p 5mSec.**

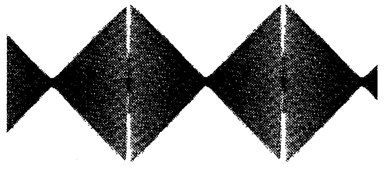

3 **640Vp-p 5mSec.**

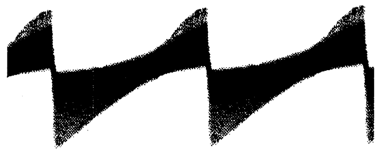

4 **500Vp-p 5mSec.**

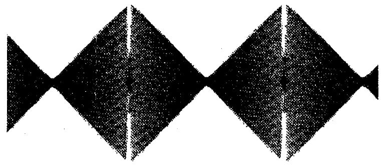

5 **750mVp-p 5mSec.**

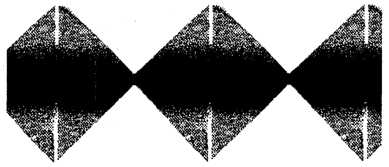

6 **2.3Vp-p 5mSec.**

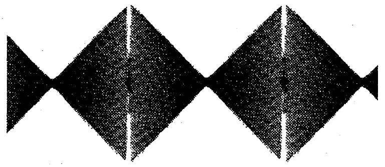

7 **1Vp-p 5mSec.**

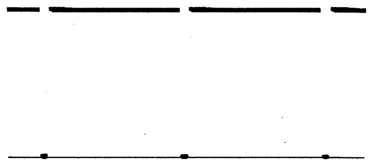

8 **2Vp-p 5mSec.**

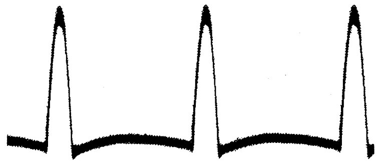

9 **1Vp-p 5mSec.**

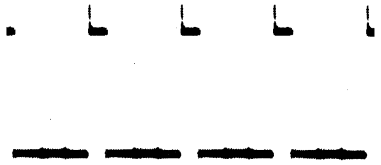

10 **2.4Vp-p 5mSec.**

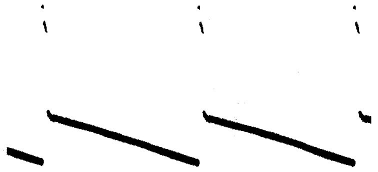

11 **700mVp-p 5mSec.**


12 **1.5Vp-p 5mSec.**


13 **1.6Vp-p 20uSec..**


14 **1.6Vp-p 20uSec.**


15 **5Vp-p 20uSec.**


16 **5Vp-p 5mSec.**

DIGITAL CONVERGENCE PANEL WAVEFORM NOTES:
UNLESS OTHERWISE SPECIFIED:

1. ALL VOLTAGES AND WAVEFORMS WERE TAKEN WITH AN NTSC COLOR BAR PATTERN SIGNAL APPLIED.
2. SWEEP TIME/DIV SETTINGS ARE SHOWN JUST BELOW THE PHOTOS IN CALIBRATED POSITION. HORIZONTAL POSITIONING OF THE WAVEFORMS WAS ADJUSTED FOR MAXIMUM CLARITY.

DC_wave.cdr
221097

Component location guide - Section 1

DIGITAL CONVERGENCE COMPONENT LOCATION GRID SECTION 1

REF. DES.	SCH ZONE	PCB ZONE
B200	J-8	F-2
B201	C-8	F-1
B204	H-4	E-2
B205	C-8	K-3
B206	H-4	J-2
B207	C-8	K-2
B208	C-8	J-1
B209	A-2	F-1
B210	L-4	F-4
B211	L-1	J-4
B212	D-1	H-2
B213	D-1	H-2
B223	E-2	E-1
B224	E-5	F-3
B225	C-1	H-1
B227	J-2	D-2
B228	A-3	D-2
B235	L-8	K-1
B237	D-1	B-1
B238	A-9	H-1
B242	A-3	D-3
B246	L-7	E-1
B248	A-4	H-3
B258	E-3	H-3
BR200	J-4	F-3
BR201	D-4	F-2
BR203	A-6	K-1
BR204	A-1	K-2
BR205	J-2	K-3
BR216	A-6	E-2
C100	H-7	J-1
C101	K-7	H-1
C106	F-8	J-1
C107	J-8	J-1
C108	K-6	H-1
C109	L-8	F-1
C110	F-8	J-1
C111	H-8	J-1
C112	L-7	D-1
C150	E-7	J-1
C151	C-7	K-1
C152	A-8	K-1
C153	C-6	K-2
C157	D-7	L-1
C158	D-8	J-1
C162	M-8	D-1
C200	H-4	E-2
C201	K-4	F-3
C206	F-5	E-2
C207	J-5	E-2
C208	K-4	H-3
C209	L-5	E-3
C210	F-5	E-2
C211	H-5	E-2
C212	L-5	E-3
C250	E-4	E-2
C251	C-4	F-2
C252	A-5	F-2
C253	C-4	H-2
C257	D-4	H-2
C258	D-6	E-2
C262	M-5	E-3
C300	H-1	J-2
C301	K-2	K-3
C306	F-2	J-2
C307	J-2	J-2
C308	K-1	L-3
C309	L-2	J-3
C310	F-2	J-2
C311	H-2	J-2
C312	L-2	J-3
C350	E-1	J-2
C351	C-2	K-2
C352	A-3	K-2
C353	C-1	K-2
C357	D-1	L-2
C358	D-3	J-2
C362	M-3	H-3
D100	K-7	F-1
D111	E-6	J-1
D112	E-6	J-1
D113	H-6	H-1
D114	H-6	H-1
D150	C-7	K-1
D200	K-5	F-3
D211	E-3	E-2
D212	E-4	E-2
D213	H-4	E-2
D214	H-4	E-2
D250	C-5	F-2
D300	K-2	K-3
D311	E-1	J-2
D312	E-1	J-2
D313	H-1	J-2
D314	H-1	J-2
D350	C-2	K-2
GTEST1	F-9	K-3
GTEST2	F-9	K-3
S100	L-8	J-3
HS150	D-8	J-2
HS200	L-5	E-3
HS250	D-5	E-2
HS300	L-3	J-1
HS350	D-3	E-1
IC100	F-7	J-1
IC200	F-5	E-2
IC300	F-2	J-2
J483	M-2	J-4
J484	M-7	D-1
J485	M-5	E-4
Q100	J-7	F-1
Q101	K-7	F-1
Q102	J-7	F-1
Q103	J-8	F-1
Q104	K-7	F-1
Q105	K-8	E-1
Q106	L-7	H-1
Q107	L-8	E-1
Q150	B-7	K-1
Q151	C-7	K-1
Q152	B-7	K-1
Q153	B-8	K-1
Q154	C-7	L-1
Q155	C-8	J-1
Q156	D-7	K-1
Q157	D-8	J-1
Q200	J-4	F-3
Q201	K-4	F-3
Q202	J-5	F-3
Q203	J-5	F-3
Q204	K-4	F-3
Q205	K-5	E-3
Q206	L-4	H-3
Q207	L-5	E-3
Q250	B-4	F-2
Q251	C-4	F-2
Q252	B-5	F-2
Q253	B-5	F-2
Q254	C-4	F-2
Q255	C-5	E-2
Q256	D-4	H-2
Q257	D-5	E-2
Q300	J-2	K-3
Q301	K-2	K-3
Q302	J-2	K-3
Q303	J-3	K-3
Q304	K-1	K-3
Q305	K-3	J-3
Q306	K-2	K-3
Q307	K-2	J-3
Q350	B-2	K-2
Q351	C-2	K-2
Q352	B-2	K-2
Q353	B-3	K-2
Q354	C-1	K-2
Q355	C-3	J-2
Q356	D-2	K-2
Q357	D-2	J-2
R100	E-7	H-1
R101	H-7	J-1
R102	J-7	F-1
R103	K-6	H-1
R104	J-8	F-1
R105	J-8	F-1
R106	J-8	F-1
R107	J-8	F-1
R108	K-6	H-1
R109	K-8	F-1
R110	J-6	F-1
R111	L-8	E-1
R112	L-8	E-1
R113	F-8	E-1
R114	J-7	J-1
R115	F-8	H-2
R147	A-8	E-1
R148	E-7	J-1
R149	A-9	E-1
R150	F-6	J-1
R152	E-7	K-1
R153	C-6	K-1
R154	B-8	K-1
R155	C-8	K-1
R156	B-8	K-1
R157	C-8	K-1
R158	C-6	L-1
R159	C-8	K-1
R160	D-7	K-1
R161	H-9	E-1
R162	H-9	E-1
R163	H-8	E-1
R179	D-7	K-1
R180	D-7	K-1
R182	L-7	F-1
R183	L-7	F-1
R198	E-5	D-2

Component location guide - Section 1 & 2

DIGITAL CONVERGENCE COMPONENT LOCATION GRID SECTION 1 & 2

Section 1 (continued)

REF. DES.	SCH ZONE	PCB ZONE
R199	E-5	E-3
R200	F-4	E-2
R201	H-4	E-2
R202	J-4	F-3
R203	K-4	F-3
R204	J-5	F-3
R205	J-5	F-3
R206	J-6	F-3
R207	J-5	F-3
R208	K-4	H-3
R209	K-6	F-3
R210	J-4	F-3
R211	L-5	E-3
R212	L-6	E-3
R213	F-5	E-3
R214	J-5	E-2
R215	F-5	D-2
R247	A-5	E-3
R248	E-4	E-2
R249	A-6	E-3
R250	F-4	E-2
R252	E-4	F-2
R253	C-4	F-2
R254	B-5	F-2
R255	C-5	F-2
R256	B-6	F-2
R257	C-6	F-2
R258	C-4	H-2
R259	C-6	F-2
R260	D-4	F-2
R261	J-6	E-3
R262	J-6	E-3
R263	H-5	E-3
R279	D-5	F-2
R280	D-5	F-2
R282	L-4	F-3
R283	L-5	F-3
R298	E-2	H-2
R299	E-3	J-3
R300	E-2	J-2
R301	H-1	J-2
R302	J-2	K-3
R303	K-1	K-3
R304	J-2	K-3
R305	J-2	K-3
R306	J-3	K-3
R307	J-3	K-3
R308	K-1	L-3
R309	K-3	J-3
R310	J-1	K-3
R311	L-3	J-3
R312	L-3	J-3
R313	F-3	J-3
R314	J-2	J-2
R315	F-3	H-2
R347	A-3	J-3
R348	E-1	J-2
R349	A-3	J-3
R350	F-1	J-2
R352	E-1	K-2
R353	C-1	K-2
R354	B-2	K-2
R355	C-2	K-2
R356	B-3	K-2
R357	C-3	K-2
R358	C-1	L-2
R359	C-3	K-2
R360	D-1	K-2
R361	J-3	J-3
R362	J-3	J-3
R363	H-3	J-3
R379	D-2	K-2
R380	D-2	K-2
R382	L-2	K-3
R383	L-2	K-3
R98	E-8	D-2
R99	E-8	D-2
SHB200	L-4	C-2
SHD200	L-4	C-2
Z200	J-4	F-3
Z201	J-4	F-3
Z300	J-1	K-3
Z301	J-1	K-3

Section 2

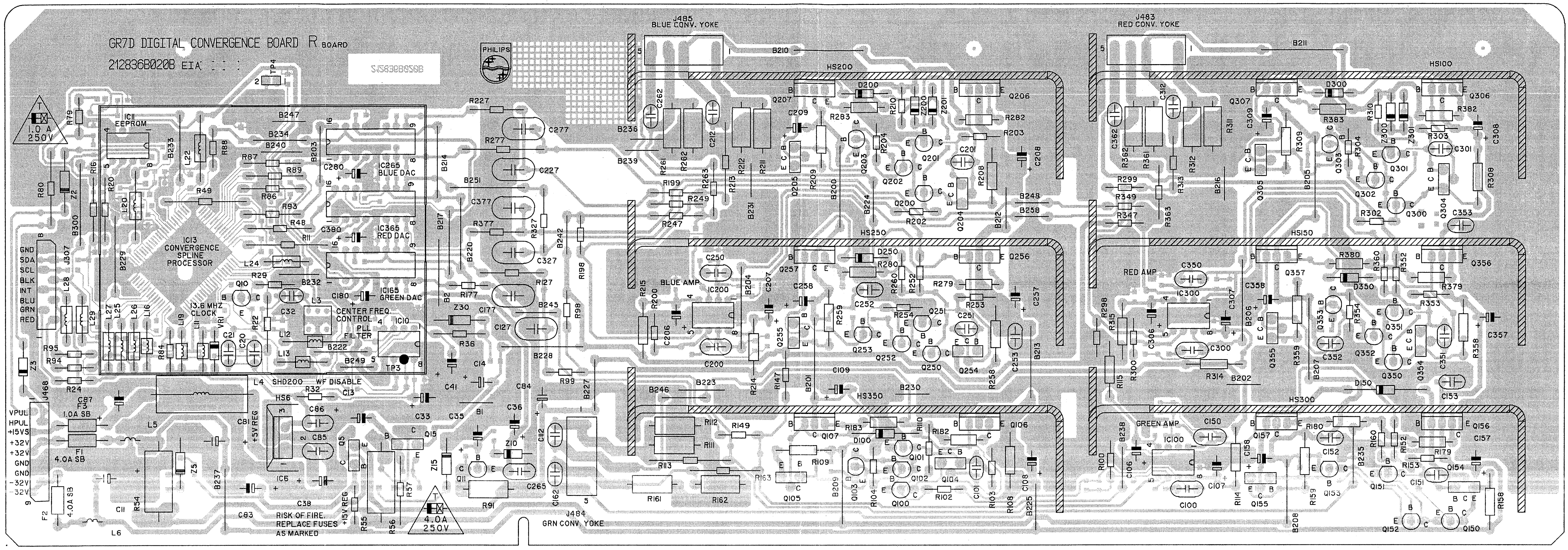
REF. DES.	SCH ZONE	PCB ZONE
B1	A-7	D-1
B2	A-7	C-2
B202	A-6	J-2
B214	B-8	C-3
B216	A-7	J-3
B217	E-2	C-3
B220	B-8	C-2
B230	A-7	F-1
B231	A-7	E-3
B240	A-5	B-3
B245	J-7	D-2
B247	A-6	B-3
B251	H-3	C-3
BR1	B-6	C-3
BR207	B-8	C-2
BR208	C-8	C-3
BR3	B-6	B-3
BR4	B-6	B-2
C11	B-2	A-1
C127	H-8	D-2
C13	A-5	C-1
C14	B-5	C-2
C173	F-7	C-2
C174	F-7	C-2
C175	F-6	C-2
C176	H-6	C-2
C177	H-7	D-2
C180	H-7	C-2
C227	H-5	D-3
C265	B-8	D-1
C273	F-4	C-3
C274	F-5	C-3
C275	F-4	C-3
C276	H-4	C-3
C277	H-5	D-3
C280	H-5	C-3
C327	H-3	D-2
C35	A-8	C-1
C36	B-8	D-1
C373	F-2	C-2
C374	F-3	C-3
C375	F-1	C-3
C376	H-1	C-2
C377	H-3	D-3
C38	B-3	B-1
C380	H-2	C-2
C81	B-1	B-1
C83	A-4	B-1
C84	B-4	D-1
C85	A-6	B-1
C86	B-6	B-1
C87	B-3	A-1
D5	A-4	B-1
D6	A-5	C-1
D7	A-8	D-1
F1	B-1	A-1
F2	B-2	A-1
F3	B-2	A-1
HS6	B-7	B-1
IC165	F-7	C-2
IC265	F-4	C-3
IC365	F-2	C-3
IC6	B-6	B-1
J468	A-2	A-1
L4	B-2	A-1
L5	B-1	A-1
L6	B-2	A-1
Q11	B-8	C-1
Q15	B-5	C-1
Q5	B-4	C-1
R127	H-8	D-2
R177	H-7	D-2
R227	H-5	D-3
R277	H-5	D-3
R327	H-3	D-2
R377	H-2	D-2
R54	A-3	A-1
R55	A-3	C-1
R56	A-5	C-1
R57	A-5	C-1
R82	A-8	C-1
R91	B-7	C-1
Z10	A-8	D-1
Z15	B-5	C-1
Z5	B-4	B-1
Z6	A-4	B-1
Z7	B-4	B-1
Z8	A-5	C-1
Z9	B-5	C-1

Component location guide - Section 3

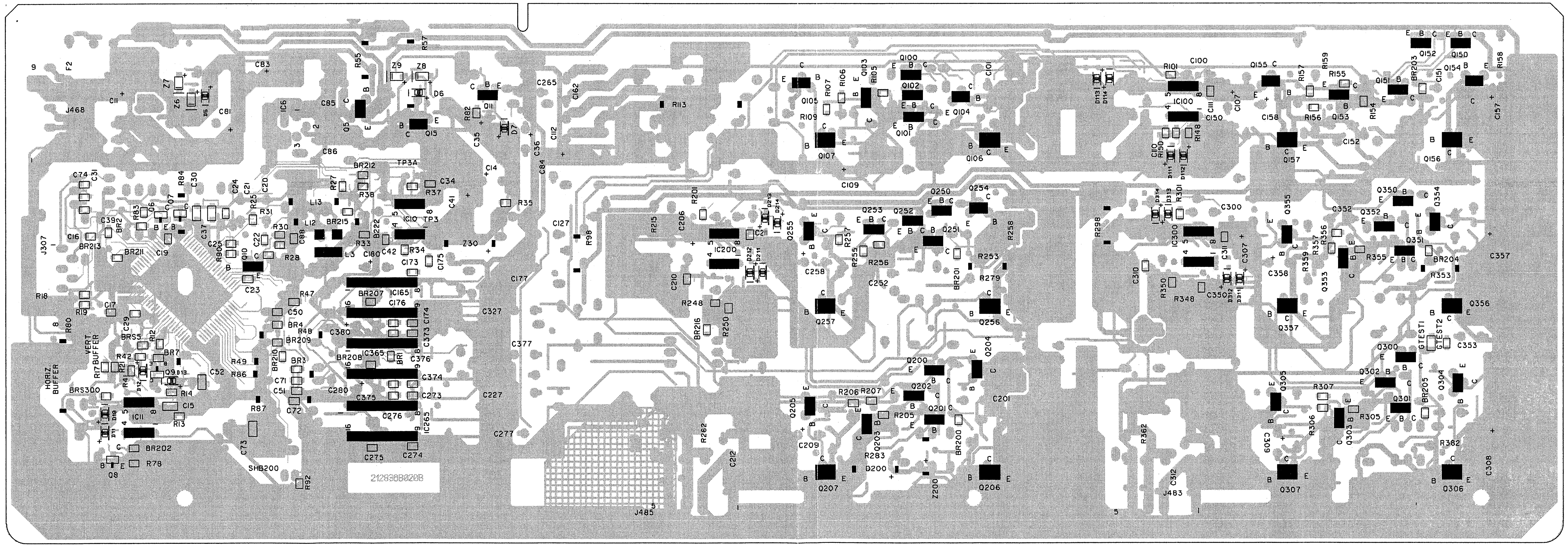
DIGITAL CONVERGENCE COMPONENT LOCATION GRID SECTION 3

REF. DES.	SCH ZONE	PCB ZONE
B203	A-3	B-3
B222	D-3	C-2
B229	C-6	A-2
B232	E-3	B-2
B233	K-5	B-3
B234	K-3	B-3
B236	E-3	E-3
B239	E-3	E-3
B249	C-3	C-2
B300	D-8	A-2
BR2	C-6	A-2
BR202	K-5	A-3
BR209	E-3	B-3
BR210	E-3	B-3
BR211	C-6	A-2
BR212	B-3	C-1
BR213	J-7	A-2
BR215	A-3	C-2
BR7	E-7	A-3
BRS300	D-7	A-3
BRS5	E-7	A-3
C15	D-8	A-3
C16	C-8	A-2
C17	C-8	A-2
C19	F-7	A-2
C20	C-3	B-2
C21	C-3	B-2
C22	D-2	B-2
C23	D-2	B-2
C24	C-2	B-2
C25	E-2	B-2
C29	K-5	A-2
C30	E-6	B-2
C31	L-7	A-2
C32	C-2	B-2
C33	A-4	C-1
C34	B-4	C-2
C37	B-2	B-2
C39	L-6	A-2
C41	D-5	C-2
C42	D-5	C-2
C50	E-3	B-2
C51	L-3	B-3
C52	L-4	B-3
C71	L-3	B-3
C72	K-3	B-3
C73	K-3	B-3
C74	L-6	A-2
C88	C-2	B-2
D10	A-6	A-3
D11	A-6	A-3
D12	B-7	A-3
D13	B-7	A-3
IC10	C-4	C-2
IC11	D-7	A-3
IC13	H-4	B-2
J307	M-7	A-2
L11	B-2	B-2
L12	C-1	B-2
L13	D-1	B-2
L16	F-6	A-2
L19	E-5	B-2
L20	K-5	A-2
L22	L-3	B-3
L24	E-2	B-2
L25	K-6	A-2
L26	K-7	A-2
L27	K-6	A-2
L28	L-7	A-2
L29	L-8	A-2
L3	C-2	C-2
Q10	D-2	B-2
Q6	J-7	A-2
Q7	K-8	B-2
Q8	B-6	A-3
Q9	B-7	A-3
R11	K-1	C-2
R12	B-7	A-3
R13	A-7	B-3
R14	A-7	A-3
R16	E-5	A-2
R17	D-5	A-3
R18	C-8	A-2
R19	C-8	A-2
R20	E-6	A-3
R21	E-6	A-3
R22	D-3	B-2
R24	L-6	A-2
R25	C-3	B-2
R27	B-2	C-2
R28	C-2	B-2
R29	D-3	B-2
R30	C-2	B-2
R31	D-2	B-2
R32	A-4	C-1
R33	D-4	C-2
R34	D-4	C-2
R35	C-5	D-2
R36	C-5	C-2
R37	B-3	C-2
R38	C-3	C-2
R41	E-7	A-3
R42	E-7	A-3
R47	F-4	B-2
R48	J-2	B-2
R49	E-2	A-3
R78	B-6	A-3
R79	B-6	A-3
R80	A-6	A-3
R83	J-7	A-2
R84	K-8	B-2
R86	K-2	B-3
R87	K-3	B-3
R88	K-3	B-3
R89	K-2	B-3
R90	E-4	B-2
R92	E-3	B-3
R93	L-2	B-3
R94	K-7	A-2
R95	L-6	A-2
TP3	B-3	C-2
TP3A	B-3	C-1
TP4	E-3	B-3
VR1	B-2	B-2
Z2	A-7	A-3
Z3	A-6	A-2
Z30	C-5	C-2

Digital convergence panel

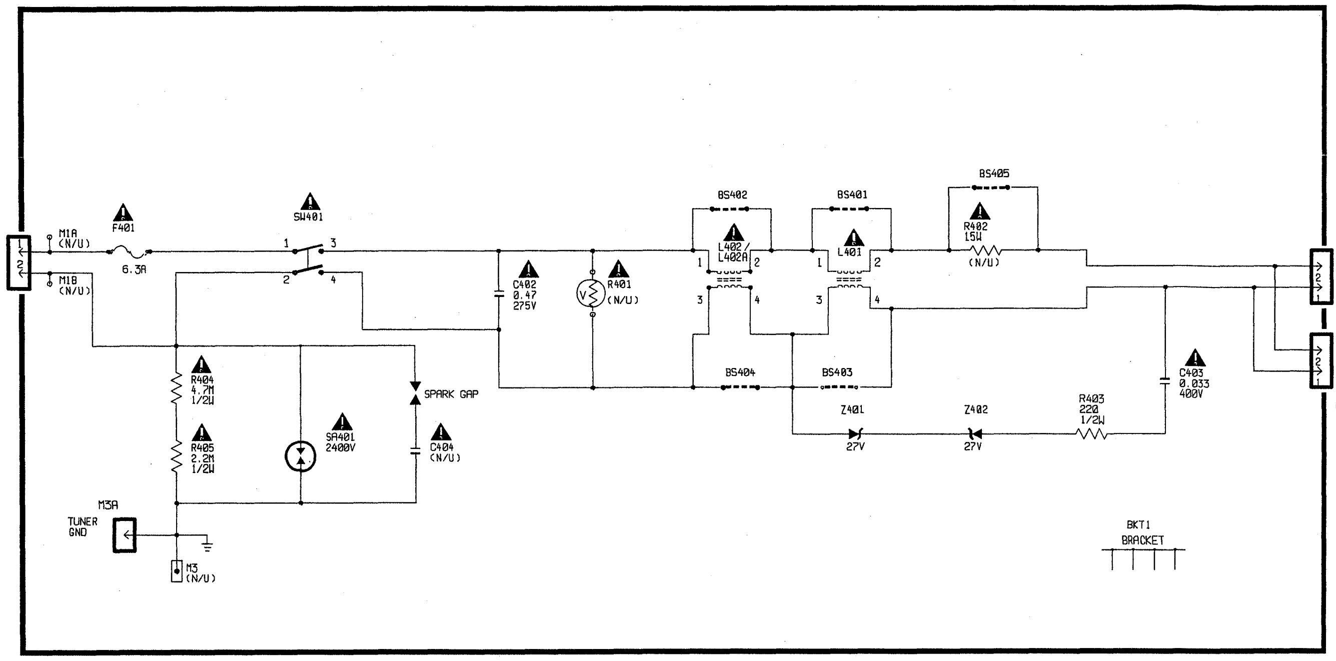

GR7D DIGITAL CONVERGENCE BOARD R BOARD
212836B020B EIA
PHILIPS
J485 BLUE CONV. YOKE
J483 RED CONV. YOKE
J484 GRN CONV. YOKE
HS200
HS100
HS250
HS150
HS350
HS300
BLUE AMP
RED AMP
GREEN AMP
IC11 EEPROM
IC13 CONVERGENCE SPLINE PROCESSOR
IC265 BLUE DAC
IC365 RED DAC
IC165 GREEN DAC
CENTER FREQ CONTROL
PLL FILTER
13.6 MHZ CLOCK
SHD200 WF DISABLE
+5V REG
+15V REG
GND
SDA
SCL
BLK
INT
BLU
GRN
RED
VPUL
HPUL
+15VS
+32V
+32V
GND
GND
-32V
-32V
1.0A SB
4.0A SB
4.0A SB
1.0 A 250V
4.0A 250V
RISK OF FIRE. REPLACE FUSES AS MARKED

2836COMP.AI
221097

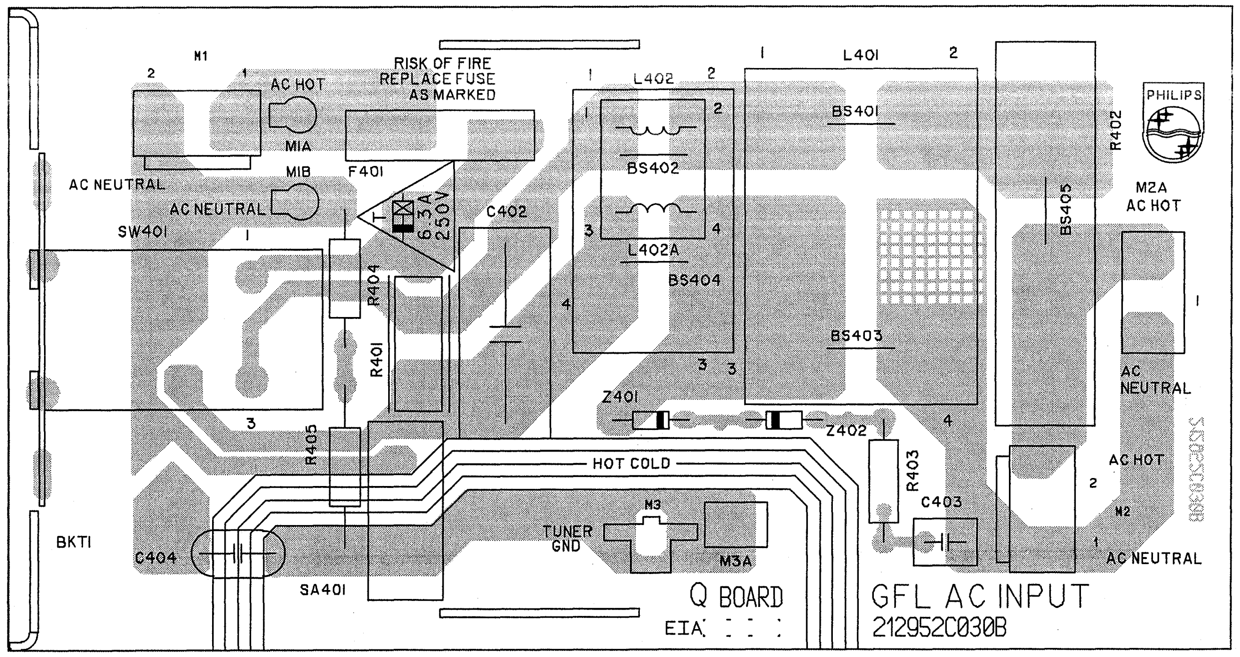

J468
J307
J485
J483
HORIZ BUFFER
VERT BUFFER
IC11
IC13
IC165
IC365
IC265
IC10
IC100
IC200
IC300
TP3A
SHB200
212836B020B

2836SMD.AI
221097

AC input panel

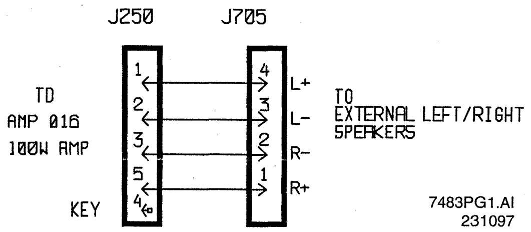

M1
M1A (N/U)
M1B (N/U)
F401
6.3A
SW401
C402 0.47 275V
R401 (N/U)
BS402
L402 L402A
BS401
L401
BS405
R402 15W (N/U)
M2
M2A
BS404
BS403
Z401 27V
Z402 27V
R403 220 1/2W
C403 0.033 400V
R404 4.7M 1/2W
R405 2.2M 1/2W
SA401 2400V
SPARK GAP
C404 (N/U)
M3A
TUNER GND
M3 (N/U)
BKT1 BRACKET

7787PG1.AI
231097

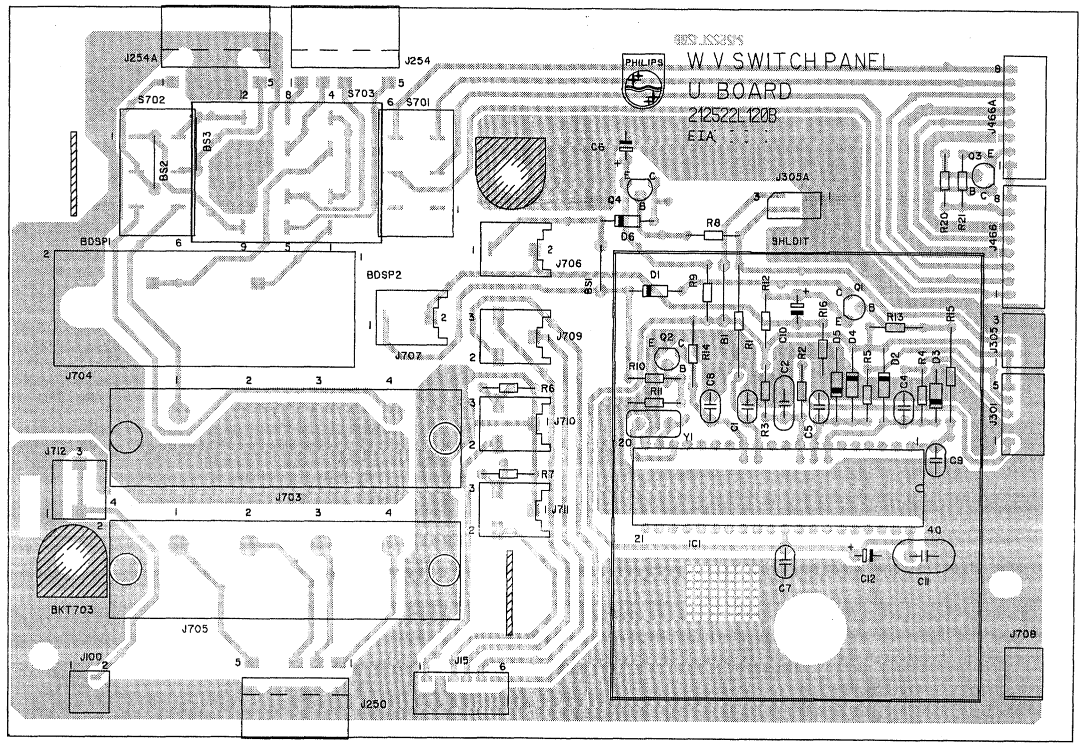

M1
AC HOT
M1A
M1B
AC NEUTRAL
F401
RISK OF FIRE REPLACE FUSE AS MARKED
6.3A 250V
SW401
C402
L402
BS402
L402A
BS404
L401
BS401
BS403
BS405
R402
PHILIPS
M2A AC HOT
AC NEUTRAL
R404
R401
R405
Z401
Z402
R403
C403
HOT COLD
TUNER GND
M3
M3A
C404
SA401
BKTI
AC HOT
M2
AC NEUTRAL
Q BOARD
EIA
GFL AC INPUT
212952C030B

2952COMP.AI
221097

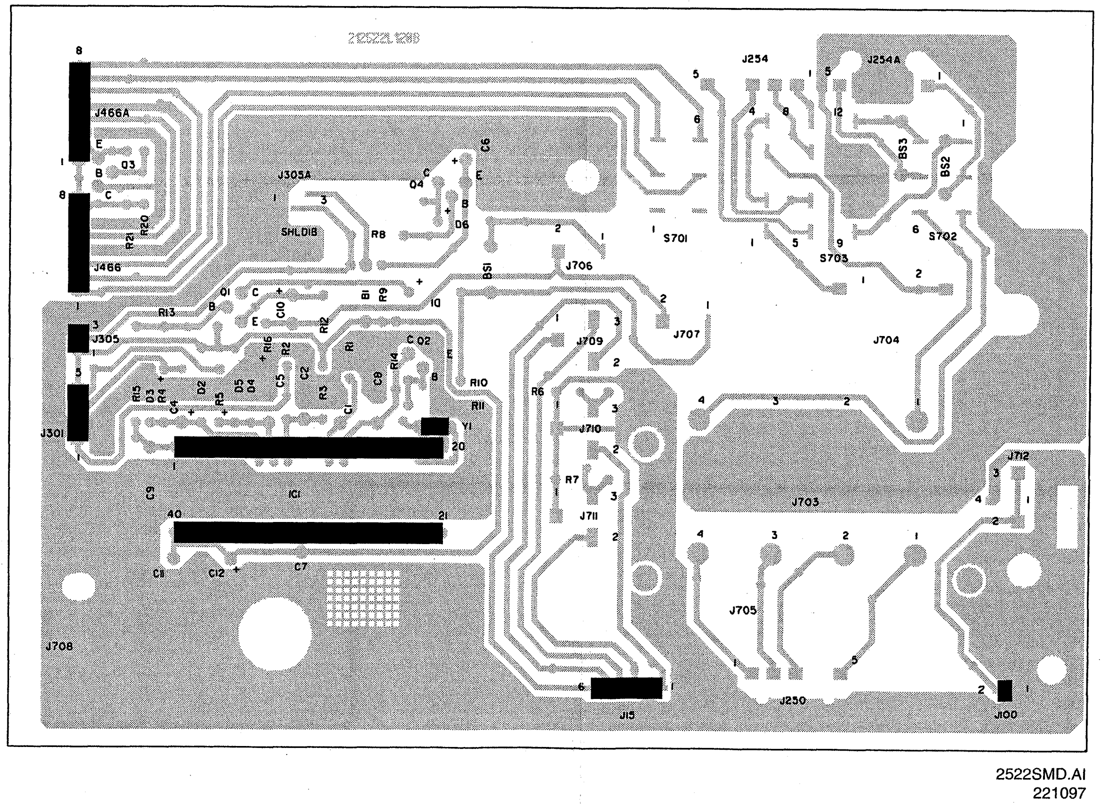
Surround sound panel


J250
J705
TO
AMP 016
100W AMP
KEY
L+
L-
R-
R+
TO
EXTERNAL LEFT/RIGHT
SPEAKERS

7483PG1.AI
231097

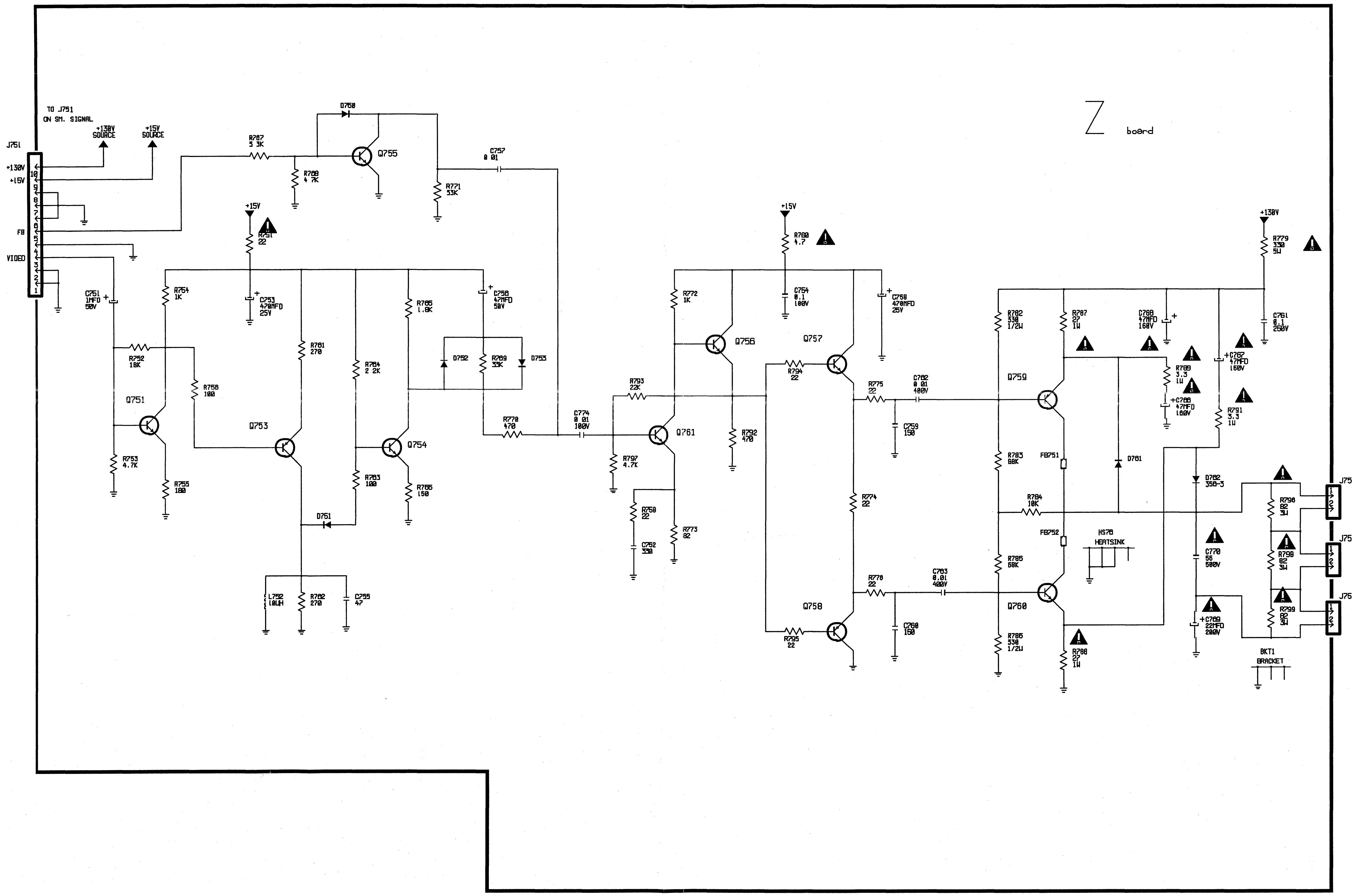

W V SWITCH PANEL
U BOARD
212522L120B
EIA
PHILIPS
J254A
J254
S702
S703
S701
BS2
BS3
BDSP1
BDSP2
J704
J703
J705
J250
J712
BKT703
J100
J15
J706
J707
J709
J710
J711
J305A
J466A
J466
J305
J301
J708
IC1
SHLDIT

2522COMP.AI
221097


212522L120B
J254
J254A
J466A
J466
J305A
J305
J301
S701
S702
S703
BS2
BS3
J706
J707
J709
J710
J711
J704
J703
J705
J712
J250
J100
J15
J708
IC1
SHLDIB

2522SMD.AI
221097

SCAVEM panel


Z board
TO J751
ON SM. SIGNAL
+130V SOURCE
+15V SOURCE
J751
+130V
+15V
FB
VIDEO
10
9
8
7
6
5
4
3
2
1
C751 1MFD 50V
R752 18K
R753 4.7K
Q751
R754 1K
R755 180
R756 100
+15V
R751 22
C753 470MFD 25V
Q753
R761 270
D751
L752 10UH
R762 270
C755 47
R764 2 2K
R763 100
Q754
R765 1.8K
R766 150
C756 47MFD 50V
D752
R789 33K
D753
R770 470
R787 3 3K
R788 4 7K
D750
Q755
R771 33K
C757 0 01
C774 0 01 100V
R793 22K
R797 4.7K
Q761
R758 22
C752 330
R773 82
R772 1K
Q756
R792 470
+15V
R760 4.7
C754 0.1 100V
C758 470MFD 25V
Q757
R794 22
R775 22
C759 150
C782 0 01 400V
R774 22
Q758
R795 22
R776 22
C760 150
C783 0.01 400V
R782 330 1/2W
R783 68K
R784 10K
R785 68K
R786 330 1/2W
Q759
Q760
R787 27 1W
FB751
FB752
R788 27 1W
D761
HS70 HEATSINK
C768 47MFD 160V
R789 3.3 1W
+C766 47MFD 160V
+C767 47MFD 160V
R791 3.3 1W
+130V
R779 330 5W
C761 0.1 250V
D762 350-3
C770 56 500V
+C769 22MFD 200V
R796 82 3W
R798 82 3W
R799 82 3W
J752
J753
J754
TO SVM COILS
TO SVM COILS
TO SVM COILS
BKT1 BRACKET

7722PG1.AI
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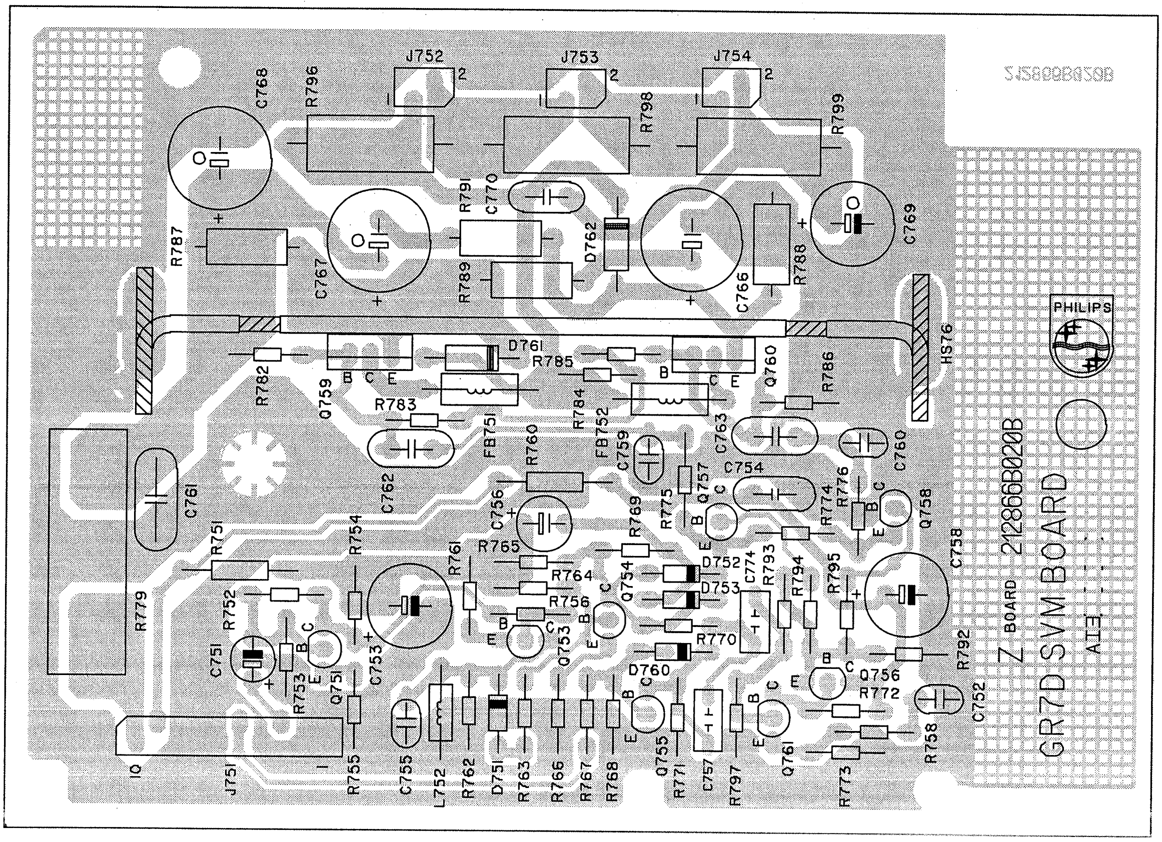
SCAVEM panel


J752
J753
J754
C768
R796
R798
R799
R787
C767
R791
C770
R789
D762
C766
R788
C769
D761
R785
R782
Q759
B C E
R783
FB751
R784
FB752
Q760
R786
HS76
PHILIPS
212866B020B
Z BOARD
GR7D SVM BOARD
AIE
C761
R779
R751
R752
C751
R753
Q751
C753
R754
C762
R760
C756
R765
R761
R764
R756
Q753
Q754
R769
R775
Q757
C754
C759
C763
R774
R776
Q758
C760
D752
D753
R793
C774
R794
R795
C758
R770
D760
Q756
R772
R792
C752
R758
R773
Q761
R797
C757
R771
Q755
R768
R767
R766
R763
D751
R762
L752
C755
R755
J751
10

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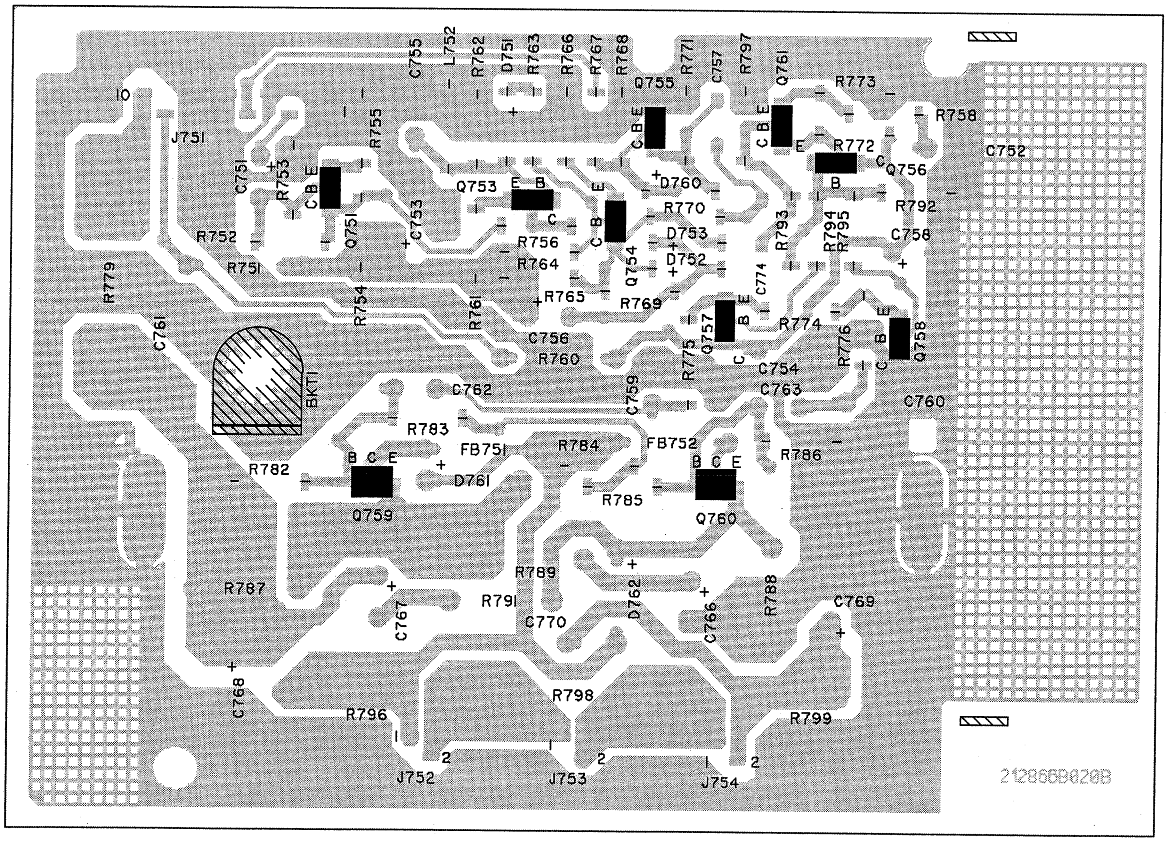
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J751
C755
L752
R762
D751
R763
R766
R767
R768
Q755
R771
C757
R797
Q761
R773
R758
C752
R755
C751
R753
Q751
C753
R752
R751
R779
R754
Q753
R756
R764
R765
R761
Q754
D760
R770
D753
D752
R793
R794
R795
R772
Q756
R792
C758
C774
R769
Q757
R774
R776
Q758
C756
R760
C761
BKT1
C762
C759
C754
C763
C760
R783
FB751
R784
FB752
R782
D761
R785
Q759
Q760
R786
R789
R787
R791
C767
C770
D762
C766
R788
C769
C768
R796
R798
R799
J752
J753
J754
212866B020B

2866SMD.AI
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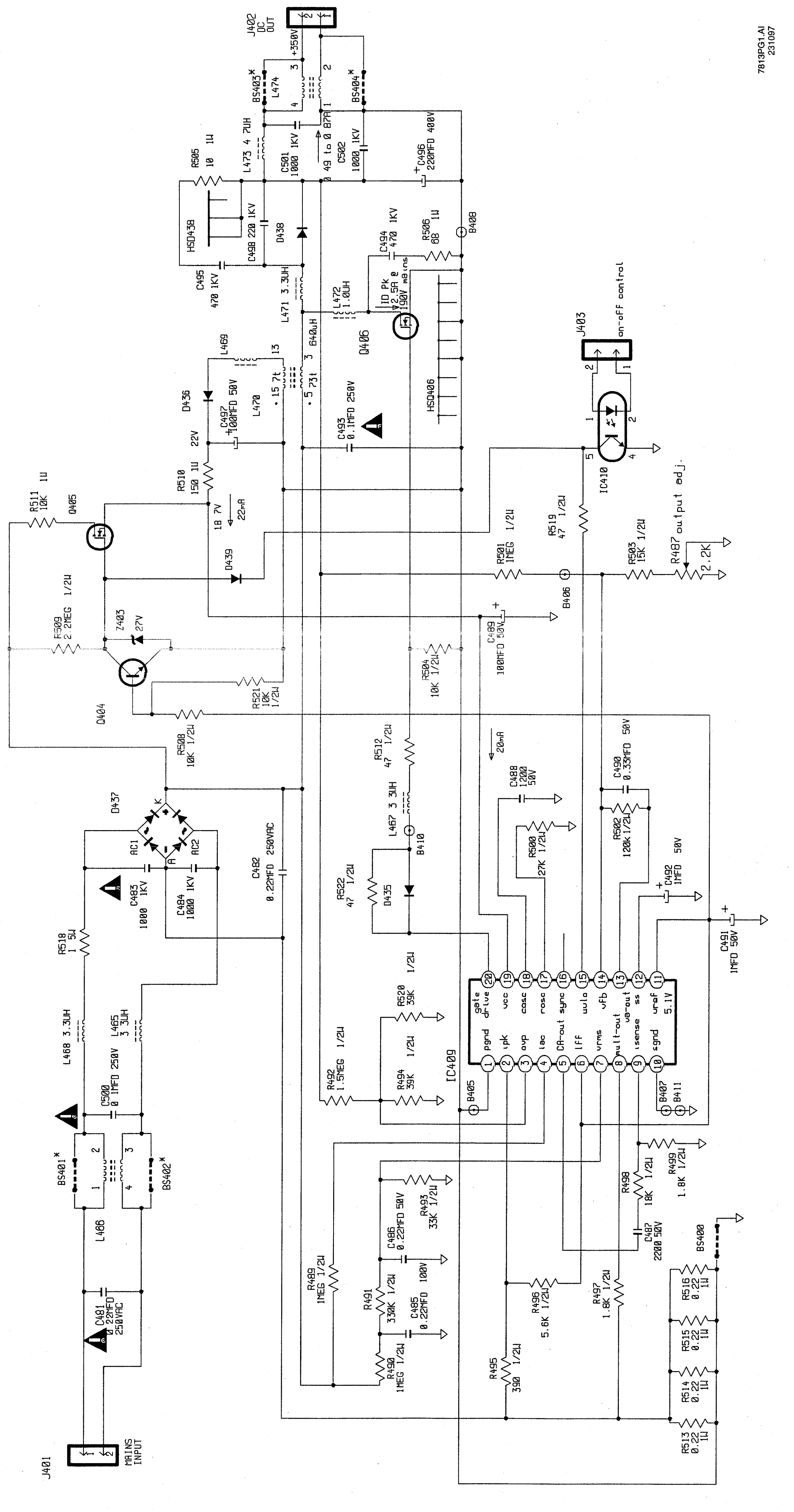
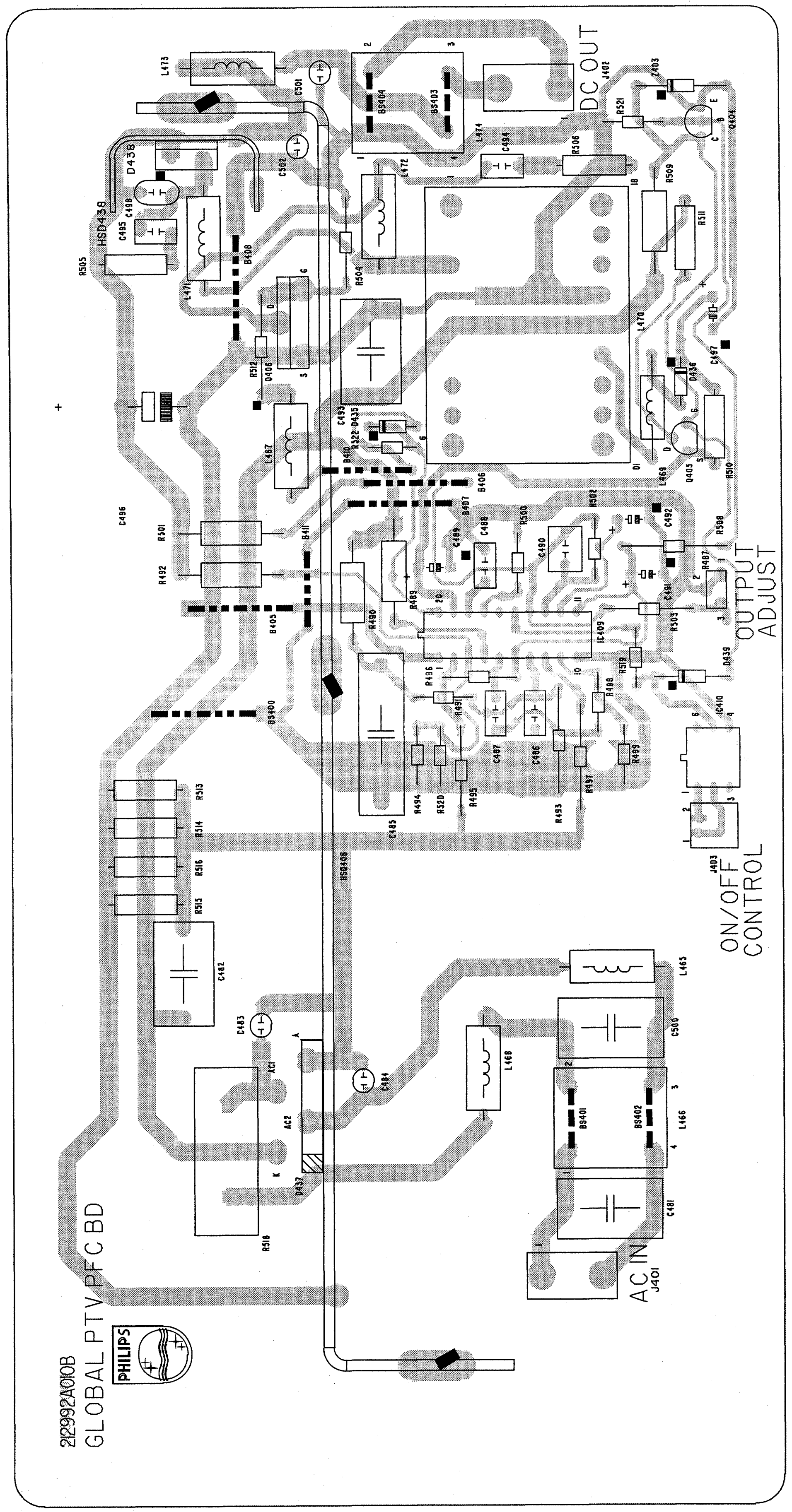
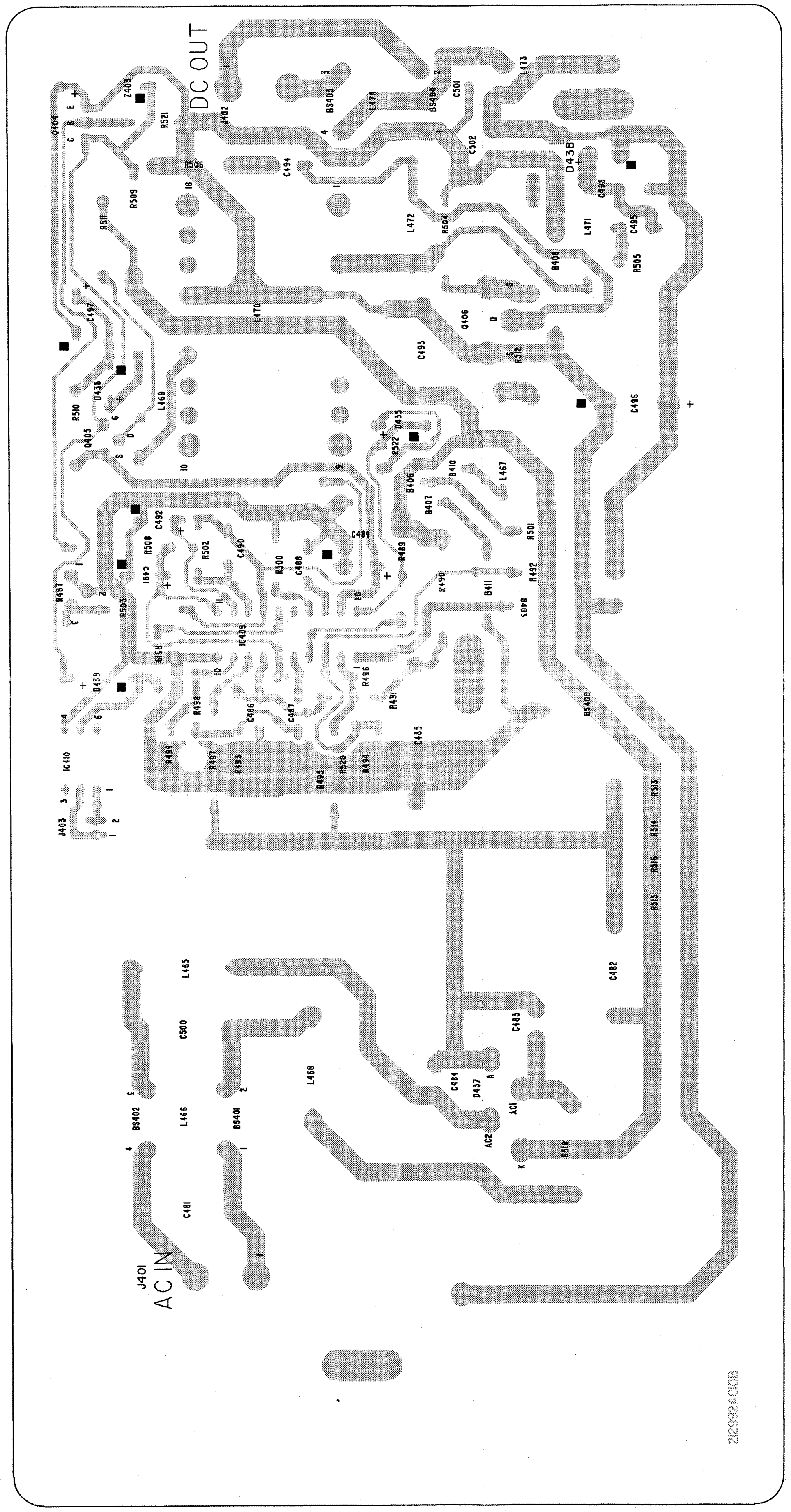
Power factor correction panel


7813PG1.AI
231097
J402 DC OUT
+350V
BS403*
BS404*
L474
L473 4.7UH
R505 10 1W
C501 1000 1KV
C502 1000 1KV
0.49 to 0.87A
C496 220MFD 400V
HSD438
C498 220 1KV
D438
C495 470 1KV
L471 3.3UH
L472 1.0UH
C494 470 1KV
R506 68 1W
B408
ID Pk 2.5A @ 190V mains
Q406
HSD406
640uH
L469
L470
D436
C497 100MFD 50V
C493 0.1MFD 250V
J403
on-off control
IC410
R510 150 1W
22V
18.7V
22mA
R511 10K 1W
Q405
D439
R501 1MEG 1/2W
R519 47 1/2W
R503 15K 1/2W
R487 2.2K
output adj.
B406
C489 100MFD 50V
R509 2.2MEG 1/2W
Z403 27V
Q404
R521 10K 1/2W
R504 10K 1/2W
R508 10K 1/2W
R512 47 1/2W
20mA
C488 1200 50V
C490 0.33MFD 50V
D437
L467 3.3UH
B410
R500 27K 1/2W
R502 120K 1/2W
AC1
AC2
C482 0.22MFD 250VAC
C483 1000 1KV
C484 1000 1KV
R522 47 1/2W
D435
C492 1MFD 50V
C491 1MFD 50V
R518 1 5W
gate drive
vcc
cosc
rosc
sync
uvlo
vfb
va-out
ss
vref 5.1V
pgnd
ipk
ovp
iac
CA-out
iff
vrms
mult-out
isense
sgnd
IC409
R520 39K 1/2W
R494 39K 1/2W
R492 1.5MEG 1/2W
B405
B407
B411
L468 3.3UH
L465 3.3UH
C500 0.1MFD 250V
BS401*
BS402*
L466
R499 1.8K 1/2W
R498 18K 1/2W
C487 2200 50V
R493 33K 1/2W
C486 0.22MFD 50V
BS400
R489 1MEG 1/2W
R491 330K 1/2W
C485 0.22MFD 100V
R496 5.6K 1/2W
R497 1.8K 1/2W
R516 0.22 1W
R515 0.22 1W
R514 0.22 1W
R513 0.22 1W
C481 0.22MFD 250VAC
R490 1MEG 1/2W
R495 390 1/2W
J401
MAINS INPUT

Power factor correction panel

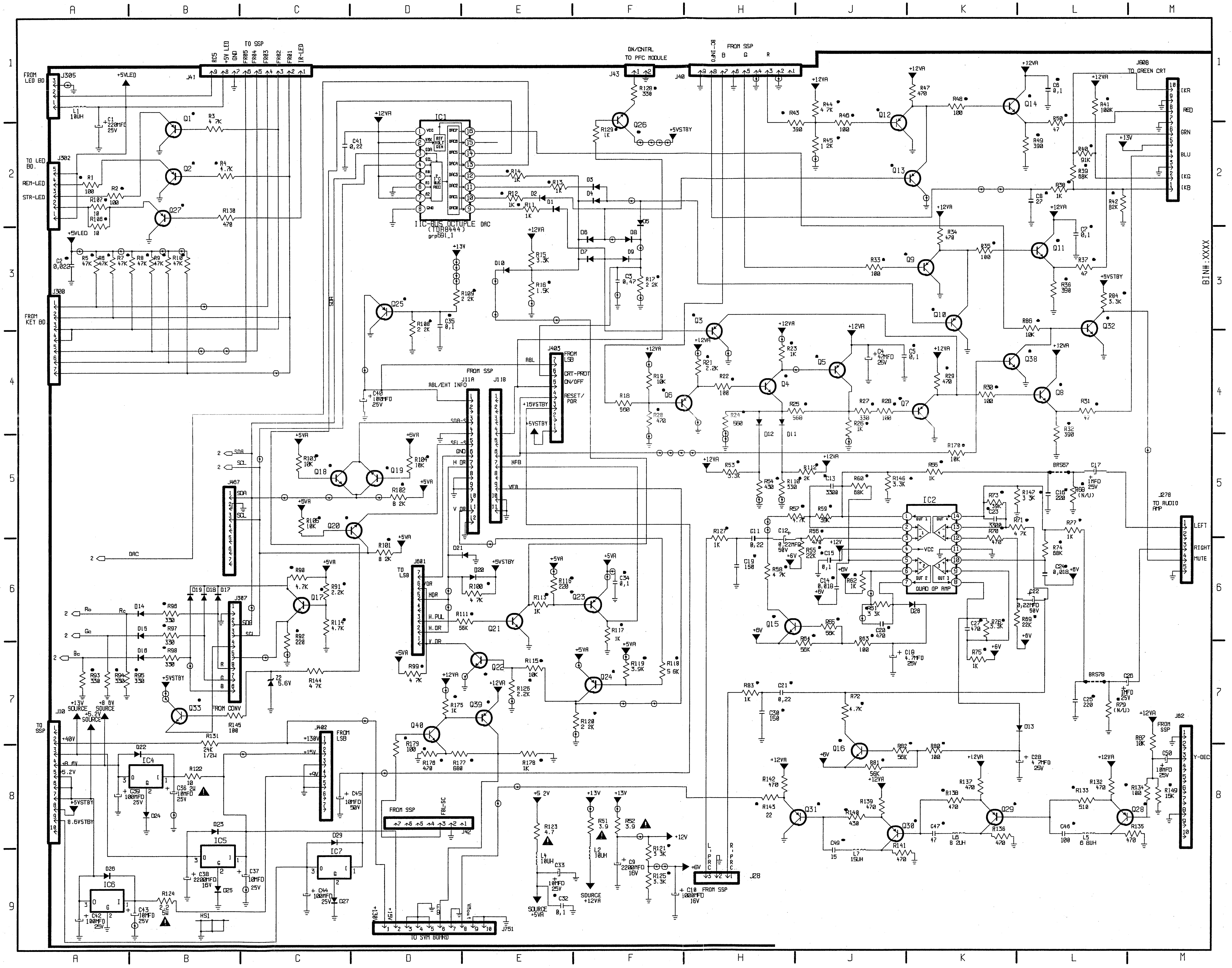

DC OUT
J402
OUTPUT ADJUST
ON/OFF CONTROL
J403
AC IN
J401
2J2992A010B
GLOBAL PTV PFC BD
PHILIPS
IC409
IC410
HSD438

2992COMP.AI
221097


DC OUT
J402
AC IN
J401
IC409
IC410
2J2992A010B

2992SMD.AI
221097

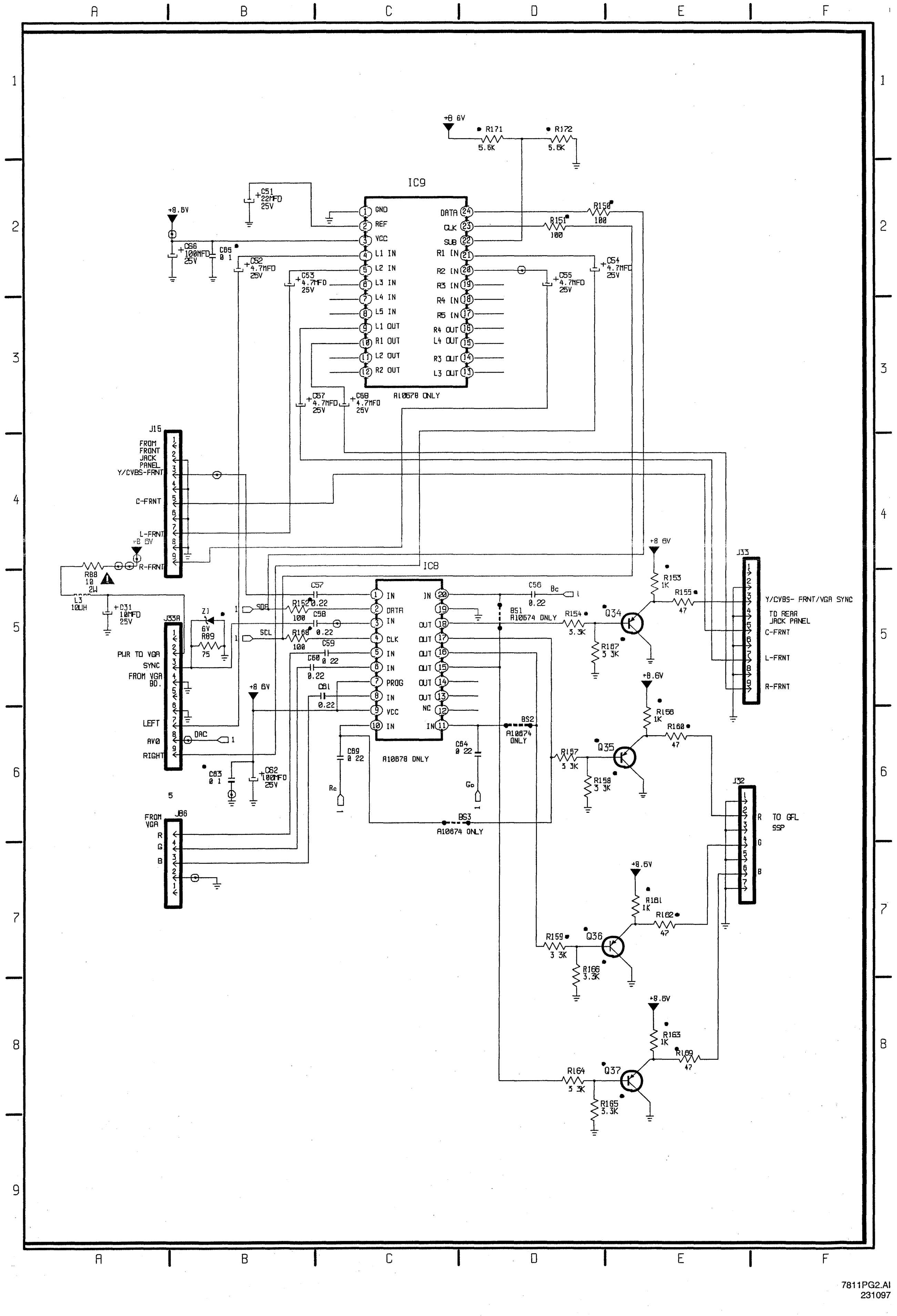
Interface panel - Section 1



A B C D E F H J K L M
1 2 3 4 5 6 7 8 9
FROM LED BD
J305
TO LED BD.
J302
REM-LED
STR-LED
FROM KEY BD
J300
J41
TO SSP
IC1
IIC-BUS OCTUPLE DAC
(TDA8444)
ON/CNTRL TO PFC MODULE
J43
J40
FROM SSP
J608 TO GREEN CRT
IKR
RED
GRN
BLU
IKG
IKB
J403 FROM LSB
CRT-PROT
ON/OFF
RESET/POR
FROM SSP
J11A
J11B
RBL/EHT INFO
J407
SDA
SCL
DAC
J307
FROM CONV
J601 TO LSB
J402 FROM LSB
J42 FROM SSP
J751 TO SVM BOARD
J10 TO SSP
IC4
IC5
IC6
IC7
HS1
IC2
QUAD OP AMP
J270 TO AUDIO AMP
LEFT
RIGHT
MUTE
J82 FROM SSP
Y-DEC
J28 FROM SSP
SOURCE +5VA
SOURCE +12VA
+5VSTBY
+12VA
+13V
BIN#:XXXX

7811PG1.AI
231097

Interface panel - Section 2


A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
IC9
GND
REF
VCC
L1 IN
L2 IN
L3 IN
L4 IN
L5 IN
L1 OUT
R1 OUT
L2 OUT
R2 OUT
DATA
CLK
SUB
R1 IN
R2 IN
R3 IN
R4 IN
R5 IN
R4 OUT
L4 OUT
R3 OUT
L3 OUT
A10678 ONLY
+8 6V
R171 5.6K
R172 5.6K
R150 100
R151 100
C51 22MFD 25V
+8.6V
C66 100MFD 25V
C65 0 1
C52 4.7MFD 25V
C53 4.7MFD 25V
C54 4.7MFD 25V
C55 4.7MFD 25V
C57 4.7MFD 25V
C68 4.7MFD 25V
J15
FROM FRONT JACK PANEL
Y/CVBS-FRNT
C-FRNT
L-FRNT
R-FRNT
R88 10 2W
L3 10UH
C31 10MFD 25V
IC8
IN
DATA
CLK
PROG
VCC
OUT
NC
C57
C58
C59
C60 0 22
C61 0.22
R152 100
R168 100
SDA
SCL
Z1 6V
R89 75
J33A
PWR TO VGA
SYNC FROM VGA BD.
LEFT
AVO
RIGHT
DAC
C83 0 1
C62 100MFD 25V
C69 0 22
C64 0 22
C56 0.22
Bc
Rc
Go
BS1 A10674 ONLY
BS2 A10674 ONLY
BS3 A10674 ONLY
A10678 ONLY
J86
FROM VGA
R
G
B
R153 1K
R155 47
R154 3.3K
R187 3 3K
Q34
R156 1K
R160 47
R157 3 3K
R158 3 3K
Q35
R161 1K
R162 47
R159 3 3K
R166 3.3K
Q36
R163 1K
R169 47
R164 3 3K
R165 3.3K
Q37
J33
Y/CVBS- FRNT/VGA SYNC
TO REAR JACK PANEL
C-FRNT
L-FRNT
R-FRNT
J32
TO GFL SSP

7811PG2.AI
231097

Component location guide Interface panel Section 1

GFL INTERFACE COMPONENT LOCATION GRID SECTION 1

REF. DES.	SCH ZONE	REF. DES.	SCH ZONE	REF. DES.	SCH ZONE
B1	C-5	BR10	E-3	C7	L-3
B15	H-5	BR11	H-4	C8	L-2
B16	F-9	BR13	F-3	C9	F-9
B19	E-8	BR14	F-3	D1	E-2
B23	E-7	BR17	J-6	D10	E-3
B25	J-2	BR18	J-6	D11	H-4
B26	F-7	BR2	B-4	D12	H-4
B27	D-7	BR20	H-4	D13	K-7
B28	K-2	BR21	F-3	D14	B-6
B29	F-4	BR22	C-5	D15	B-6
B31	B-7	BR3	A-1	D16	B-7
B36	M-5	BR31	F-7	D17	B-6
B37	F-8	BR32	F-7	D18	B-6
B38	F-9	BR34	C-5	D19	B-6
B39	H-5	BR35	D-5	D2	E-2
B40	D-7	BR4	A-3	D20	E-6
B41	E-8	BR5	B-4	D21	D-6
B44	B-8	BR89	C-4	D22	B-8
B45	E-3	BR9	H-4	D23	B-8
B46	D-3	BRS67	L-5	D24	B-8
B47	F-4	BRS78	L-7	D25	B-9
B48	H-4	C1	A-1	D26	A-9
B49	F-2	C10	F-9	D27	C-9
B50	E-3	C11	H-5	D28	J-6
B51	F-3	C12	H-5	D29	C-8
B52	D-3	C13	J-5	D3	F-2
B53	E-3	C14	J-6	D4	F-2
B54	D-3	C15	J-6	D5	F-2
B55	H-1	C16	L-5	D6	F-3
B56	D-3	C17	L-5	D7	F-3
B58	D-8	C18	J-7	D8	F-3
B59	F-2	C19	H-6	D9	F-3
B60	H-1	C2	A-3	HS1	B-9
B61	B-3	C20	J-6	IC1	D-2
B62	B-3	C21	H-7	IC2	K-6
B63	A-3	C22	L-6	IC4	B-8
B64	F-8	C23	K-5	IC5	B-9
B65	B-3	C24	L-6	IC6	A-9
B66	E-7	C25	L-7	IC7	C-9
B67	E-7	C26	L-7	J10	A-8
B69	D-6	C27	K-6	J11A	E-5
B7	A-9	C28	K-8	J11B	E-5
B70	F-6	C3	F-3	J278	M-6
B71	E-6	C30	H-7	J28	H-9
B72	D-4	C32	E-9	J300	A-4
B73	K-2	C33	E-9	J302	A-2
B74	K-2	C34	F-6	J305	A-1
B75	D-6	C35	D-3	J307	B-7
B76	E-6	C36	B-8	J40	H-1
B77	F-6	C37	B-9	J402	C-8
B78	C-7	C38	B-9	J403	E-4
B79	B-9	C39	A-8	J41	C-1
B8	F-2	C4	J-4	J42	D-8
B80	B-8	C40	D-4	J43	F-1
B82	C-6	C41	C-2	J467	B-5
B83	C-7	C42	A-9	J601	D-6
B84	F-8	C43	A-9	J608	M-2
B85	F-2	C44	C-9	J62	M-8
B86	F-2	C45	D-8	J751	D-9
B87	B-7	C46	L-8	L1	A-1
B88	B-7	C47	K-8	L2	F-8
B90	F-5	C49	J-8	L4	E-9
B91	F-5	C5	J-4	L5	L-8
B92	F-5	50	M-8	L6	K-8
B93	H-5	C6	L-1	L7	J-8

Component location guide Interface panel Sect. 1

GFL INTERFACE COMPONENT LOCATION GRID SECTION 1

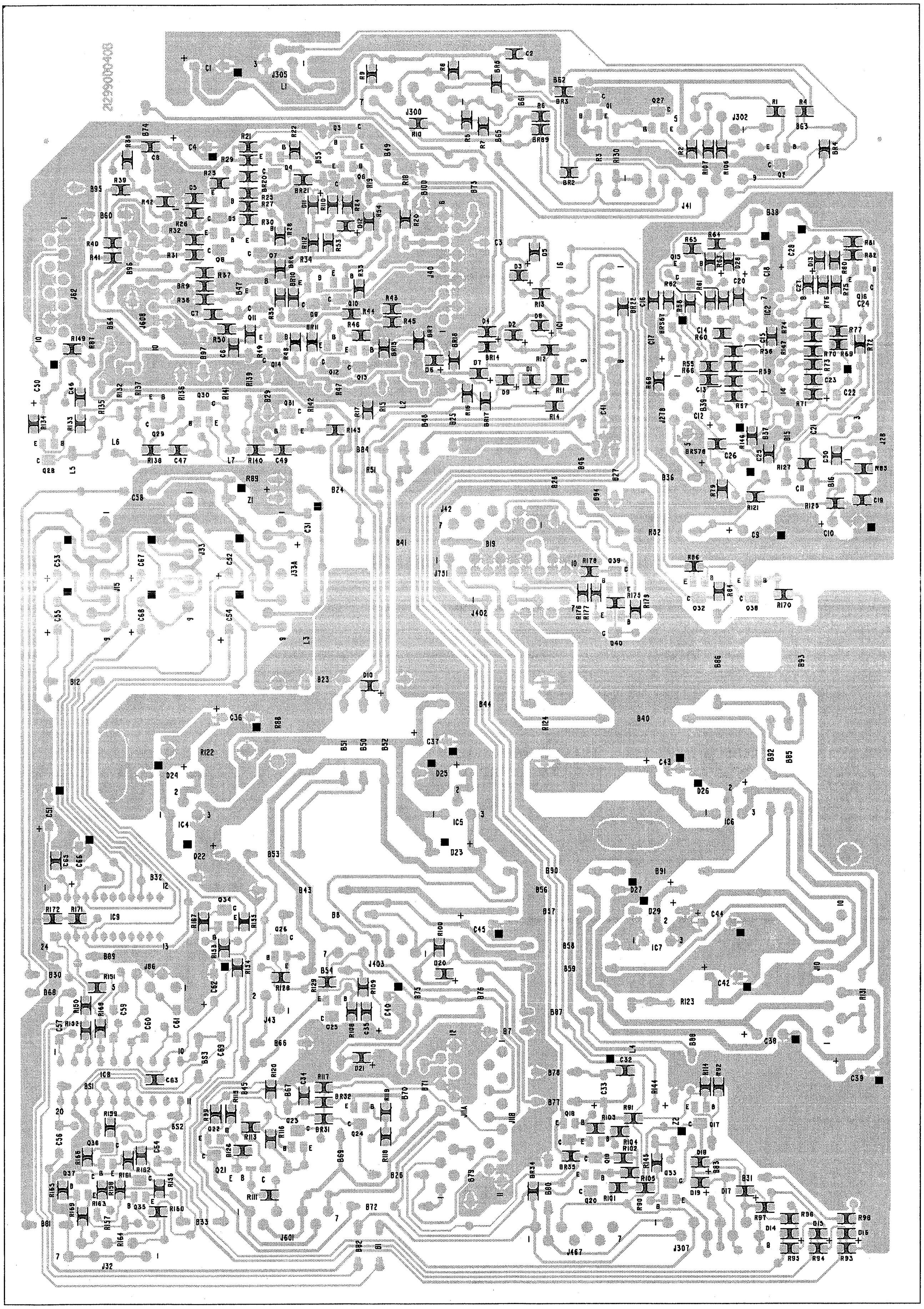
REF. DES.	SCH ZONE
Q1	B-2
Q10	K-3
Q11	L-3
Q12	J-1
Q13	J-2
Q14	K-1
Q15	H-6
Q16	J-8
Q17	C-6
Q18	C-5
Q19	D-5
Q2	B-2
Q20	C-5
Q21	E-6
Q22	E-7
Q23	F-6
Q24	F-7
Q25	D-3
Q26	F-1
Q27	B-2
Q28	L-8
Q29	K-8
Q3	H-3
Q30	J-8
Q31	J-8
Q32	L-3
Q33	B-7
Q38	K-4
Q4	H-4
Q5	J-4
Q6	F-4
Q7	K-4
Q8	L-4
Q9	K-3
R1	A-2
R10	B-3
R100	E-6
R101	D-6
R102	D-5
R103	C-5
R104	D-5
R105	C-5
R106	A-2
R107	A-2
R108	D-3
R109	D-3
R11	E-2
R110	H-5
R111	D-6
R112	J-5
R113	E-6
R114	C-6
R115	E-7
R116	E-6
R117	F-6
R118	F-7
R119	F-7
R12	E-2
R120	E-7
R121	F-8
R122	B-8
R123	E-8
R124	B-9
R125	F-9
R126	E-7
R127	H-5
R128	F-1
R129	F-2
R13	E-2
R130	B-2
R131	B-7
R132	L-8
R133	L-8
R134	M-8
R135	L-8
R136	K-8
R137	K-8
R138	K-8
R139	J-8
R14	E-2
R140	J-8
R141	J-8
R142	H-8
R143	H-8
R144	C-7
R145	B-7
R146	J-5
R147	K-5
R149	M-8
R15	E-3
R16	E-3
R17	F-3
R170	K-5
R18	F-4
R19	F-4
R2	A-2
R20	F-4
R21	H-4
R22	H-4
R23	H-4
R24	H-4
R25	H-4
R26	J-4
R27	J-4
R28	J-4
R29	K-4
R3	B-2
R30	K-4
R31	L-4
R32	L-4
R33	J-3
R34	K-3
R35	K-3
R36	L-3
R37	L-3
R38	L-2
R39	L-2
R4	B-2
R40	L-2
R41	L-1
R42	L-2
R43	H-1
R44	J-1
R45	J-2
R46	J-1
R47	J-1
R48	K-1
R49	L-2
R5	A-3
R50	L-1
R51	F-8
R52	F-8
R53	H-5
R54	H-5
R55	H-6
R56	J-5
R57	H-5
R58	H-6
R59	J-5
R6	A-3
R60	J-5
R61	J-6
R62	J-6
R63	J-6
R64	J-6
R65	J-6
R66	K-5
R68	L-5
R69	K-6
R7	A-3
R70	K-5
R71	K-5
R72	J-7
R73	K-5
R74	L-6
R75	K-7
R76	K-6
R77	L-5
R79	L-7
R8	B-3
R80	K-8
R81	J-8
R82	J-8
R83	H-7
R84	L-3
R86	L-3
R87	M-7
R9	B-3
R90	C-6
R91	C-6
R92	C-6
R93	A-7
R94	A-7
R95	A-7
R96	B-6
R97	B-6
R98	B-7
R99	D-7
Z2	C-7

Component location guide Interface panel Section 2

GFL INTERFACE COMPONENT LOCATION GRID SECTION 2

REF. DES.	SCH ZONE
B12	D-2
B24	B-6
B30	C-5
B32	A-2
B33	A-4
B43	A-4
B57	A-4
B68	B-4
B81	B-6
B89	B-7
C31	A-5
C51	B-2
C52	B-2
C53	B-2
C54	D-2
C55	D-2
C56	D-5
C57	B-5
C58	B-5
C59	C-5
C60	B-5
C61	B-5
C62	B-6
C63	B-6
C64	D-6
C65	B-2
C66	A-2
C67	B-3
C68	C-3
C69	C-6
IC8	C-5
IC9	C-2
J15	A-4
J32	E-6
J33	E-5
J33A	A-5
J86	A-7
L3	A-5
Q34	E-5
Q35	E-6
Q36	D-7
Q37	E-8
R150	D-2
R151	D-2
R152	B-5
R153	E-5
R154	D-5
R155	E-5
R156	E-6
R157	D-6
R158	D-6
R159	D-7
R160	E-6
R161	E-7
R162	E-7
R163	E-8
R164	D-8
R165	D-8
R166	D-7
R167	D-5
R168	B-5
R169	E-8
R88	A-4
R89	B-5
Z1	B-5

Interface panel



2990SMD.AI
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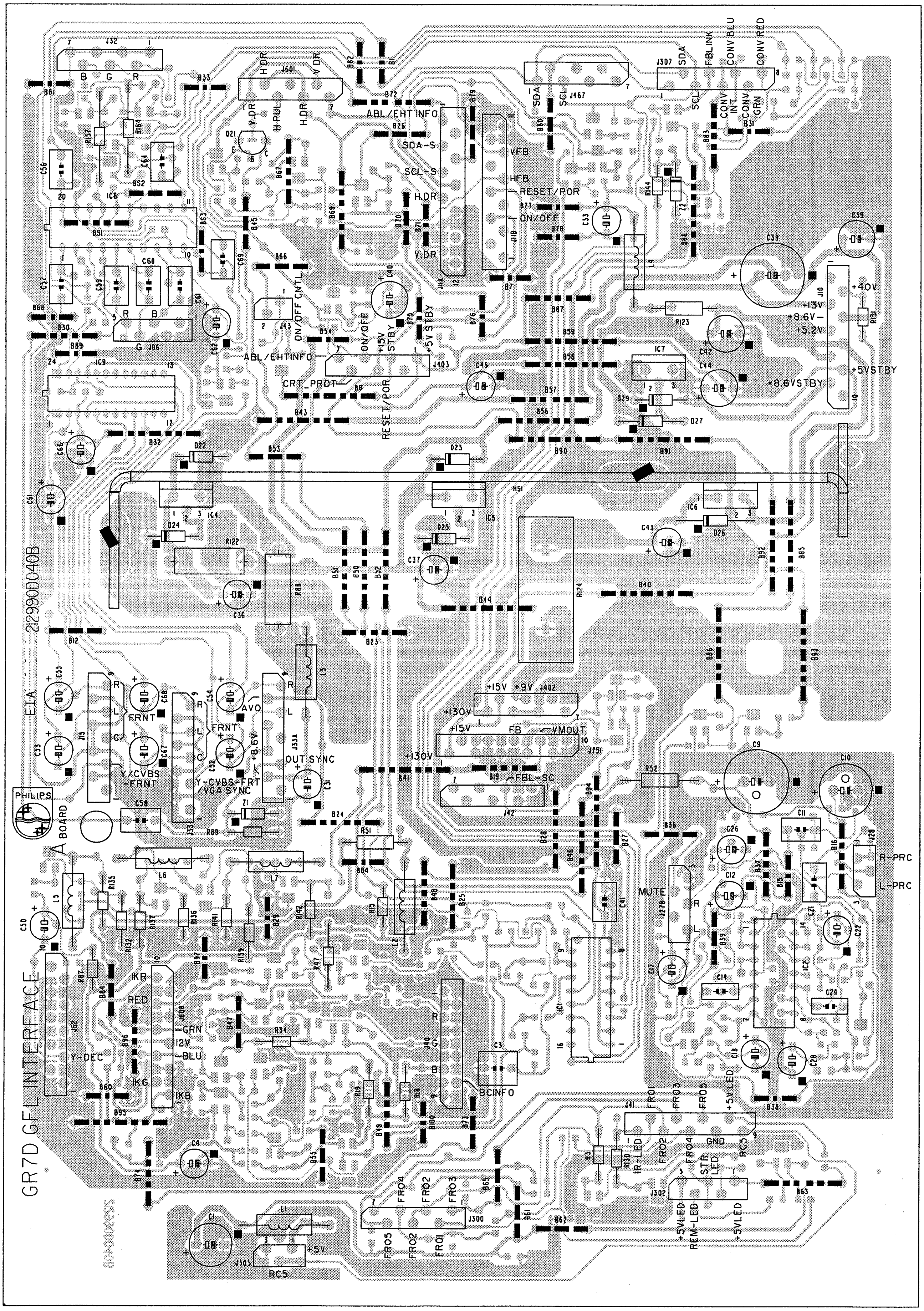
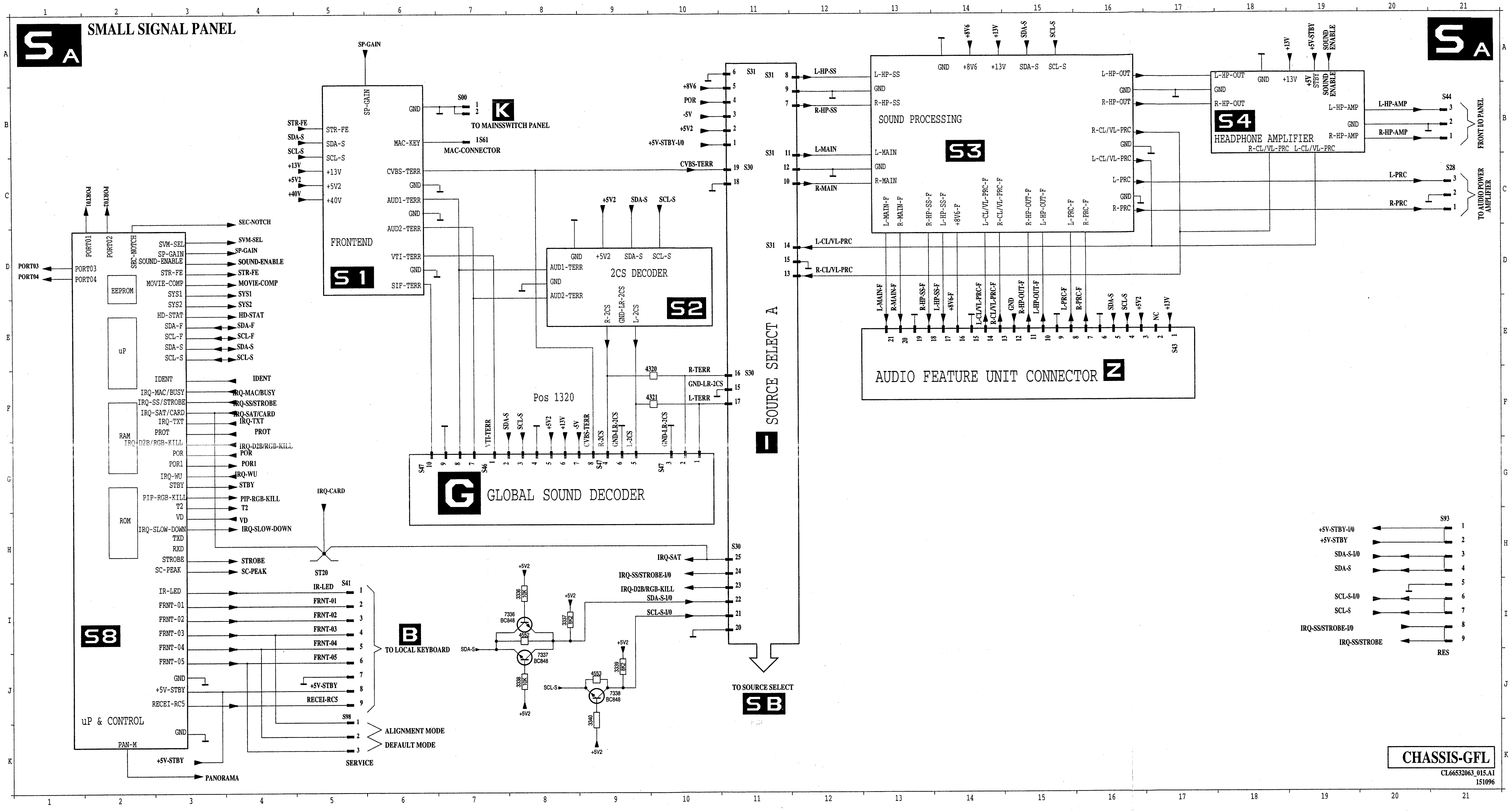
Interface panel

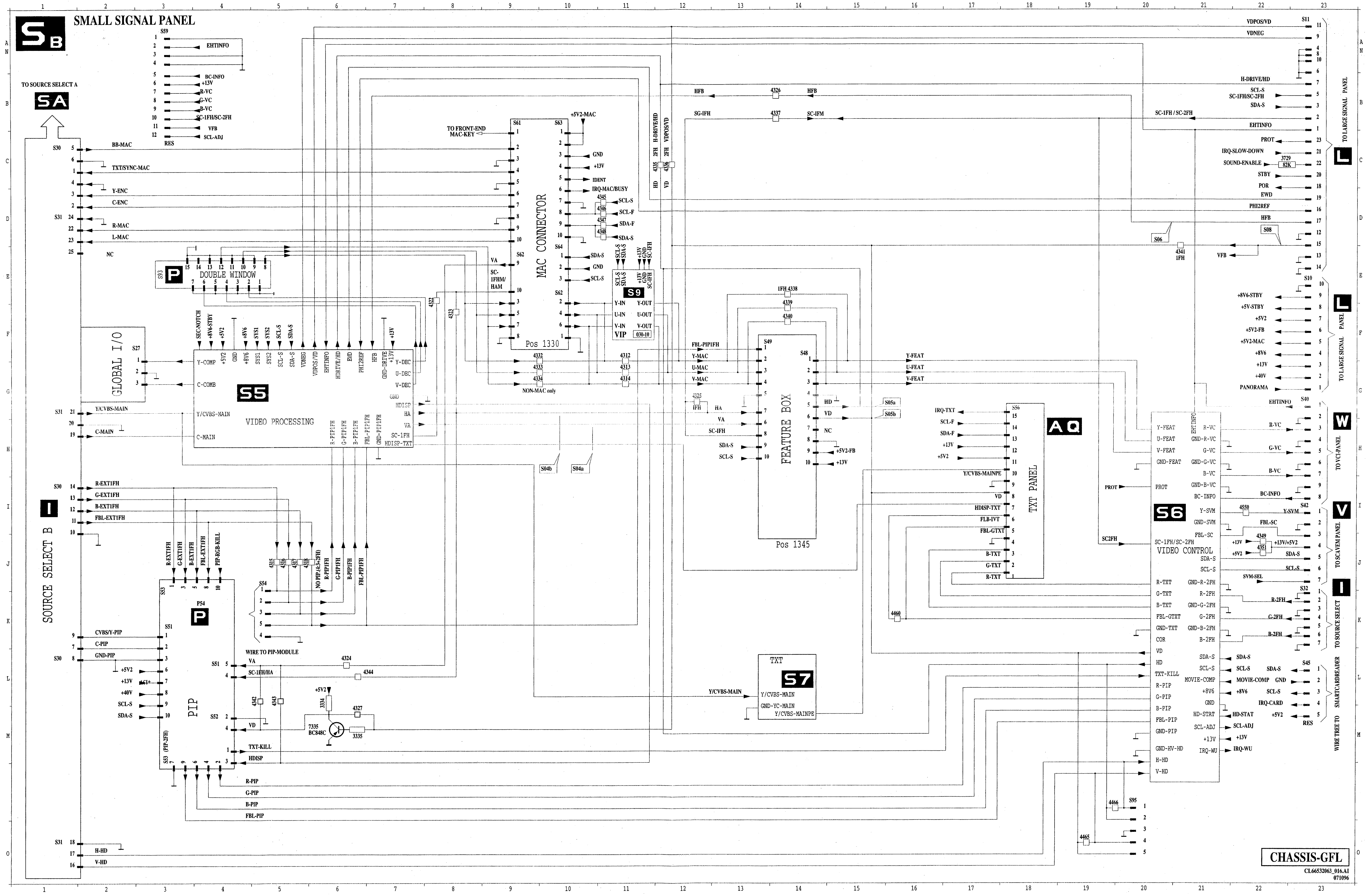

J32
B G R
B33
J601
H DR
V DR
B82
B1
B72
J307
SDA
FBLINK
CONV BLU
CONV RED
SDA
SCL
J467
SCL
CONV INT
CONV GRN
B31
B81
R157
R164
C56
C64
B52
IC8
Q21
V.DR
H PUL
H.DR
ABL/EHT INFO
B25
SDA-S
SCL-S
H.DR
V.DR
B79
VFB
HFB
RESET/POR
ON/OFF
B77
B78
J118
J114
B80
B83
R144
Z2
C33
B88
L4
C38
C39
J10
+40V
+13V
+8.6V
+5.2V
R131
+5VSTBY
+8.6VSTBY
B51
B53
C59
B45
B63
B69
B70
B71
B66
C40
ON/OFF CNTL
J43
ON/OFF
+15V STBY
+5V STBY
B76
B7
B87
R123
C42
C57
C59
C60
C61
R B
G J86
B68
B30
B89
C62
B34
ABL/EHTINFO
J403
CRT_PROT
RESET/POR
B8
B59
B58
IC7
C44
C45
B57
B56
D29
D27
IC9
B43
B32
C66
D22
B53
D23
B90
B91
C51
IC4
D24
R122
HS1
IC5
D25
C37
IC6
D26
C43
B92
B85
2I2990D040B
C36
R88
B51
B50
B52
R124
B40
B44
B12
B23
B86
B93
EIA
C55
J15
C68
R L FRNT
C54
AVO
FRNT
J35A
L3
+15V +9V J402
+130V
+15V FB VMOUT
J751
C53
C67
Y/CVBS -FRNT
C52
+8.6V
Y-CVBS-FRT /VGA SYNC
OUT SYNC
C31
+130V
B41
B19
FBL-SC
J42
C9
C10
R52
PHILIPS
A BOARD
C58
J33
Z1
R89
B24
R51
B94
B36
C11
C26
J28
R-PRC
L-PRC
L6
L7
B84
B28
B46
B27
C41
MUTE
J278
R L
C12
B37
B15
B16
C21
C22
L5
R135
R136
R141
R142
B29
R15
L2
B48
B25
C50
R132
R137
R139
R47
B97
IC1
C17
B39
C14
IC2
C24
R87
B64
IKR
RED
J608
GRN
12V
BLU
IKG
IKB
B96
J62
Y-DEC
B47
R34
J40
R G B
C3
BCINFO
C18
C28
B38
B60
B95
R19
R18
B100
B73
B49
J41
FR01 FR03 FR05 +5VLED
IR-LED FR02 FR04 GND RC5
R3
R130
GR7D GFL INTERFACE
C4
B74
B55
B65
J302
STR LED
B63
+5VLED REM-LED +5VLED
C1
L1
J305
+5V
RC5
J300
FR04 FR02 FR03
FR05 FR02 FR01
B61
B62

Block diagram Small signal panel


SA
SMALL SIGNAL PANEL
SP-GAIN
S1
FRONTEND
STR-FE
SDA-S
SCL-S
+13V
+5V2
+40V
GND
MAC-KEY
CVBS-TERR
AUD1-TERR
AUD2-TERR
VTI-TERR
SIF-TERR
S00
K
TO MAINSSWITCH PANEL
1S61
MAC-CONNECTOR
S2
2CS DECODER
R-2CS
GND-LR-2CS
L-2CS
SOURCE SELECT A
S31
S30
+8V6
POR
-5V
+5V-STBY-I/0
L-HP-SS
R-HP-SS
L-MAIN
R-MAIN
L-CL/VL-PRC
R-CL/VL-PRC
R-TERR
GND-LR-2CS
L-TERR
4320
4321
Pos 1320
G
GLOBAL SOUND DECODER
S46
S47
S3
SOUND PROCESSING
L-HP-OUT
R-HP-OUT
L-PRC
R-PRC
S4
HEADPHONE AMPLIFIER
L-HP-AMP
R-HP-AMP
S44
FRONT I/O PANEL
S28
TO AUDIO POWER AMPLIFIER
+5V-STBY
SOUND ENABLE
Z
AUDIO FEATURE UNIT CONNECTOR
S43
L-MAIN-F
R-MAIN-F
R-HP-SS-F
L-HP-SS-F
+8V6-F
L-CL/VL-PRC-F
R-CL/VL-PRC-F
R-HP-OUT-F
L-HP-OUT-F
L-PRC-F
R-PRC-F
NC
S8
uP & CONTROL
EEPROM
uP
RAM
ROM
PORT01
PORT02
PORT03
PORT04
SEC-NOTCH
SVM-SEL
SOUND-ENABLE
MOVIE-COMP
SYS1
SYS2
HD-STAT
SDA-F
SCL-F
IDENT
IRQ-MAC/BUSY
IRQ-SS/STROBE
IRQ-SAT/CARD
IRQ-TXT
PROT
IRQ-D2B/RGB-KILL
POR1
IRQ-WU
STBY
PIP-RGB-KILL
T2
VD
IRQ-SLOW-DOWN
TXD
RXD
STROBE
SC-PEAK
IRQ-CARD
ST20
IR-LED
FRNT-01
FRNT-02
FRNT-03
FRNT-04
FRNT-05
+5V-STBY
RECEI-RC5
PAN-M
PANORAMA
S41
B
TO LOCAL KEYBOARD
S98
ALIGNMENT MODE
DEFAULT MODE
SERVICE
IRQ-SAT
IRQ-SS/STROBE-I/0
IRQ-D2B/RGB-KILL
SDA-S-I/0
SCL-S-I/0
7336 BC848
7337 BC848
7338 BC848
3336
3337
3338
3339
3340
4552
4553
TO SOURCE SELECT
SB
S93
SDA-S-I/0
SCL-S-I/0
IRQ-SS/STROBE-I/0
IRQ-SS/STROBE
RES
CHASSIS-GFL
CL66532063_015.A1
151096

3336	F	8
3337	I	8
3338	J	8
3339	J	9
3340	J	9
4320	F	10
4321	F	10
4552	I	8
4553	J	9
7336	I	8
7337	J	8
7338	J	9
S00	B	7
S28	C	21
S30	F	11
S30	C	11
S30	H	11
S31	A	11
S31	A	11
S31	B	11
S31	D	11
S41	I	5
S43	E	17
S44	B	21
S46	G	7
S47	G	10
S47	G	9
S47	G	6
S61	B	7
S93	H	21
S98	J	5
ST20	H	5

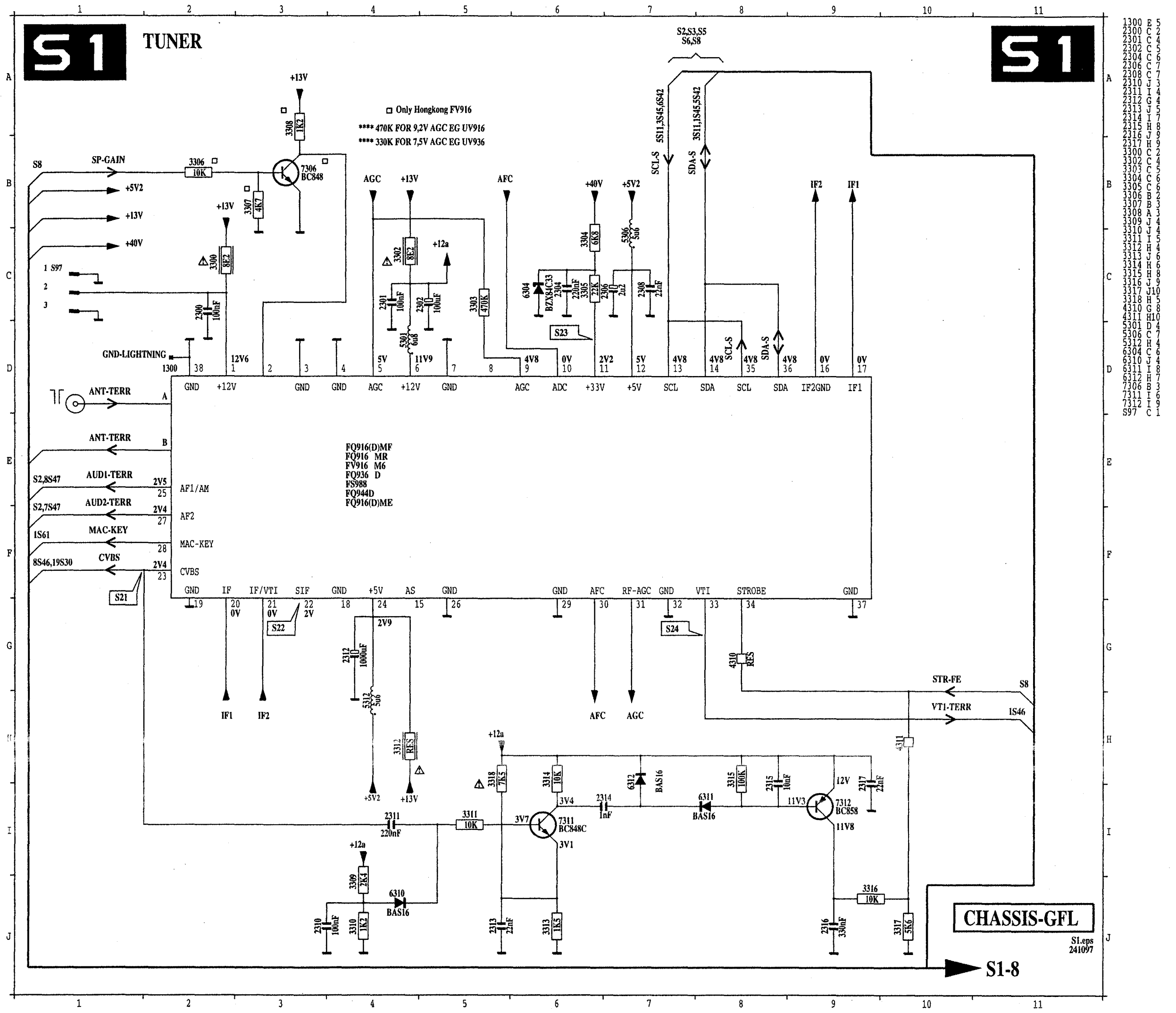
Block diagram Small signal panel

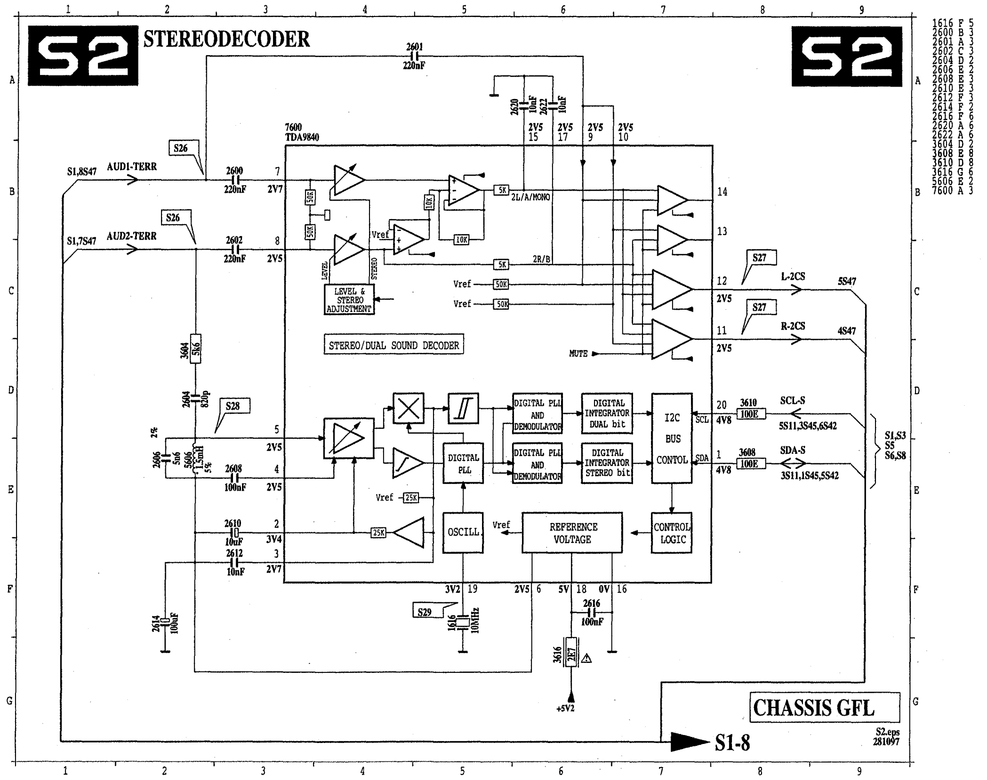

SB
SMALL SIGNAL PANEL
S59
EHTINFO
BC-INFO
+13V
R-VC
G-VC
B-VC
SC-1FH/SC-2FH
VFB
SCL-ADJ
RES
TO SOURCE SELECT A
SA
S30
S31
BB-MAC
TXT/SYNC-MAC
Y-ENC
C-ENC
R-MAC
L-MAC
NC
S93
P
DOUBLE WINDOW
GLOBAL I/O
S27
Y/CVBS-MAIN
C-MAIN
R-EXT1FH
G-EXT1FH
B-EXT1FH
FBL-EXT1FH
SOURCE SELECT B
I
CVBS/Y-PIP
C-PIP
GND-PIP
+5V2
+13V
+40V
SCL-S
SDA-S
H-HD
V-HD
TO FRONT-END MAC-KEY
S61
S63
S62
S64
+5V2-MAC
MAC CONNECTOR
Pos 1330
GND
+13V
IDENT
IRQ-MAC/BUSY
SCL-S
SCL-F
SDA-F
SDA-S
VA
SC-1FHM/HAM
NON-MAC only
S9
VIP
Y-IN
U-IN
V-IN
Y-OUT
U-OUT
V-OUT
030-10
S5
VIDEO PROCESSING
Y-COMP
C-COMB
Y/CVBS-MAIN
C-MAIN
SEC-NOTCH
+8V6-STBY
+5V2
GND
+8V6
SYS1
SYS2
SCL-S
SDA-S
VDNEG
VDPOS/VD
EHTINFO
HDRIVE/HD
EWD
PHI2REF
HFB
GND-DRIVE
+13V
Y-DEC
U-DEC
V-DEC
HDISP
HA
VA
SC-1FH
HDISP-TXT
R-PIP1FH
G-PIP1FH
B-PIP1FH
FBL-PIP1FH
GND-PIP1FH
S04b
S04a
P
P54
PIP
S53
S51
S52
S54
WIRE TO PIP-MODULE
SC-1FH/HA
VD
TXT-KILL
HDISP
R-PIP
G-PIP
B-PIP
FBL-PIP
NO PIP (4:3-2FH)
7335 BC848C
3334
3335
4327
4324
4344
4342
4343
H-DRIVE/HD
VDPOS/VD
2FH
HFB
SG-1FH
SC-1FM
4326
4337
1FH 4338
4339
4340
FBL-PIP1FH
Y-MAC
U-MAC
V-MAC
S49
S48
FEATURE BOX
Pos 1345
HA
VA
SC-1FH
SDA-S
SCL-S
HD
VD
NC
+5V2-FB
+13V
S05a
S05b
Y-FEAT
U-FEAT
V-FEAT
TXT
S7
Y/CVBS-MAIN
GND-YC-MAIN
Y/CVBS-MAINPE
AQ
S56
TXT PANEL
IRQ-TXT
SCL-F
SDA-F
+13V
+5V2
Y/CVBS-MAINPE
VD
HDISP-TXT
FLB-IVT
FBL-GTXT
B-TXT
G-TXT
R-TXT
4460
S6
VIDEO CONTROL
Y-FEAT
U-FEAT
V-FEAT
GND-FEAT
PROT
SC-1FH/SC-2FH
R-TXT
G-TXT
B-TXT
FBL-GTXT
GND-TXT
COR
VD
HD
TXT-KILL
R-PIP
G-PIP
B-PIP
FBL-PIP
GND-PIP
GND-HV-HD
H-HD
V-HD
R-VC
GND-R-VC
G-VC
GND-G-VC
B-VC
GND-B-VC
BC-INFO
Y-SVM
GND-SVM
FBL-SC
SDA-S
SCL-S
GND-R-2FH
R-2FH
GND-G-2FH
G-2FH
GND-B-2FH
B-2FH
MOVIE-COMP
+8V6
GND
HD-STAT
SCL-ADJ
+13V
IRQ-WU
SC2FH
4465
4466
S95
S11
VDPOS/VD
VDNEG
H-DRIVE/HD
SCL-S
SC-1FH/SC-2FH
SDA-S
SC-1FH / SC-2FH
EHTINFO
PROT
IRQ-SLOW-DOWN
SOUND-ENABLE
3729 82K
STBY
POR
EWD
PHI2REF
HFB
S06
S08
4341 1FH
VFB
TO LARGE SIGNAL PANEL
L
S10
+8V6-STBY
+5V-STBY
+5V2
+5V2-FB
+5V2-MAC
+8V6
+13V
+40V
PANORAMA
TO LARGE SIGNAL PANEL
L
S40
W
TO VC/PANEL
S42
V
TO SCAVEN PANEL
4550
4349
4351
+13V/+5V2
SVM-SEL
S32
I
TO SOURCE SELECT
S45
WIRE TREE TO SMARTCARDREADER
IRQ-CARD
CHASSIS-GFL
CL66532063_016.A1
071096

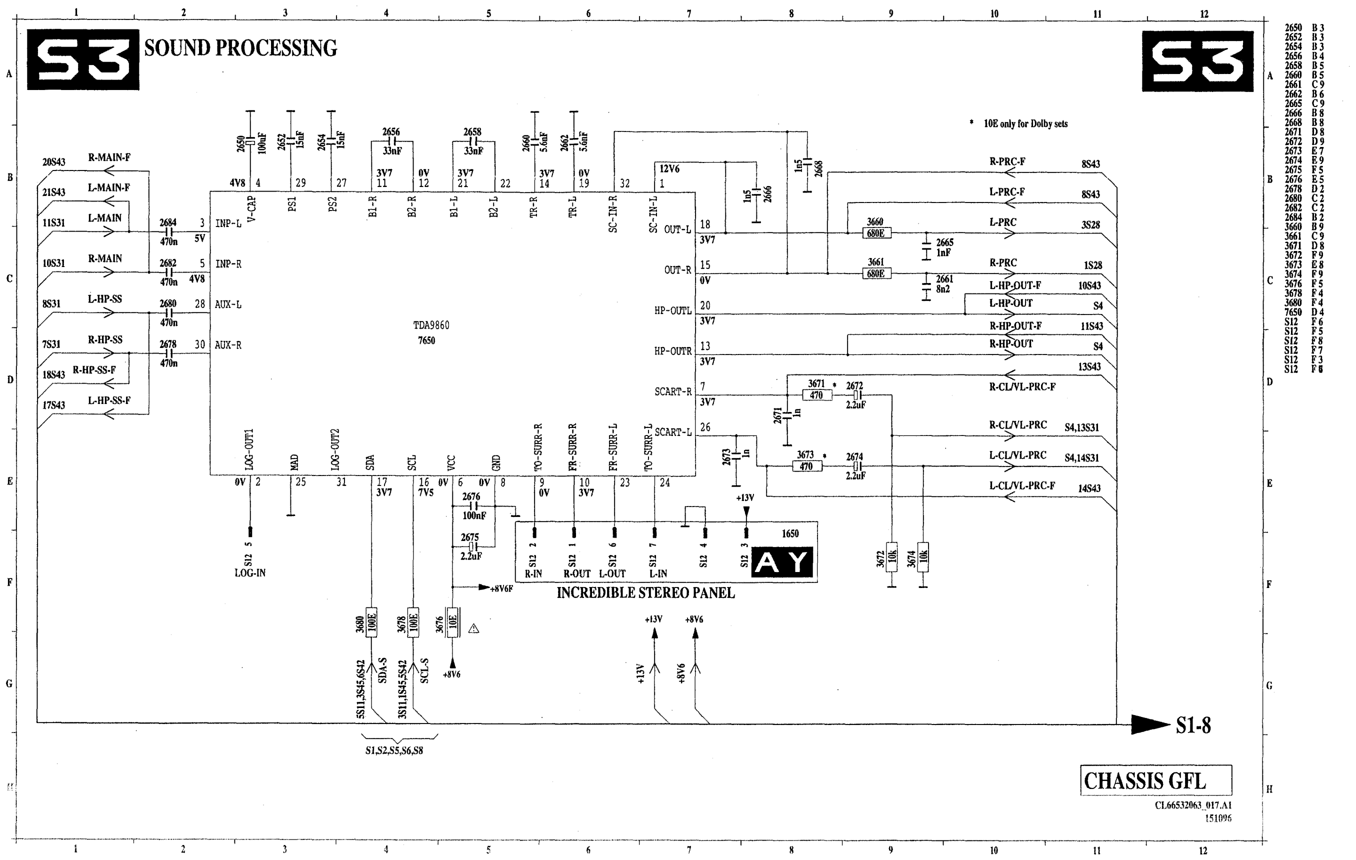
3729	C22
4315	J 5
4316	J 5
4317	J 5
4318	J 5
4322	E 8
4323	F 8
4324	L 6
4325	G12
4326	B14
4332	F 9
4333	G 9
4334	G 9
4335	C12
4336	C12
4337	B14
4338	E14
4339	F14
4340	F14
4341	D21
4342	L 5
4343	G 9
4344	L 6
4345	D11
4346	D11
4347	D11
4348	D11
4349	J22
4351	J22
4460	K16
4465	O19
4466	N19
4550	I22
S10	E23
S11	A23
S27	F 3
S30	C 1
S30	L 1
S30	I 1
S31	O 1
S31	G 1
S31	D 1
S32	J23
S40	G23
S42	I23
S45	L23
S48	F14
S49	F13
S51	K 3
S51	L 4
S52	M 4
S53	J 3
S53	M 3
S54	J 5
S56	G18
S59	A 3
S61	B 9
S62	E10
S62	E 9
S63	B10
S64	E10
S95	N20

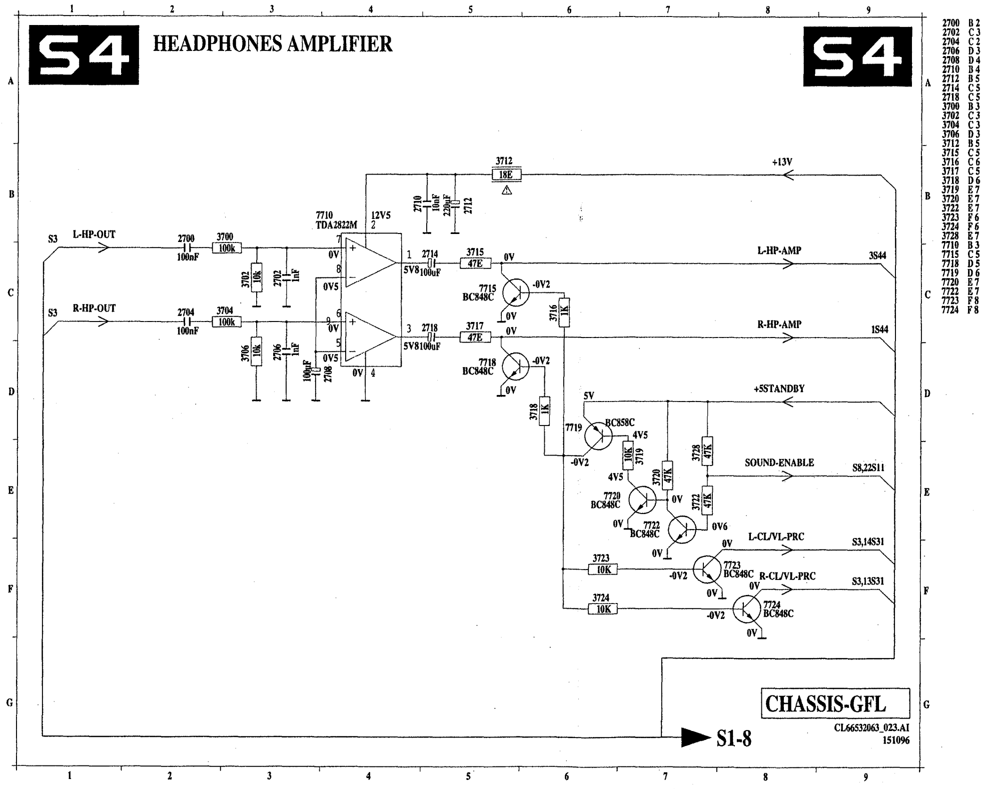
Tuner / Stereodecoder

Sound processing / Headphone amplifier

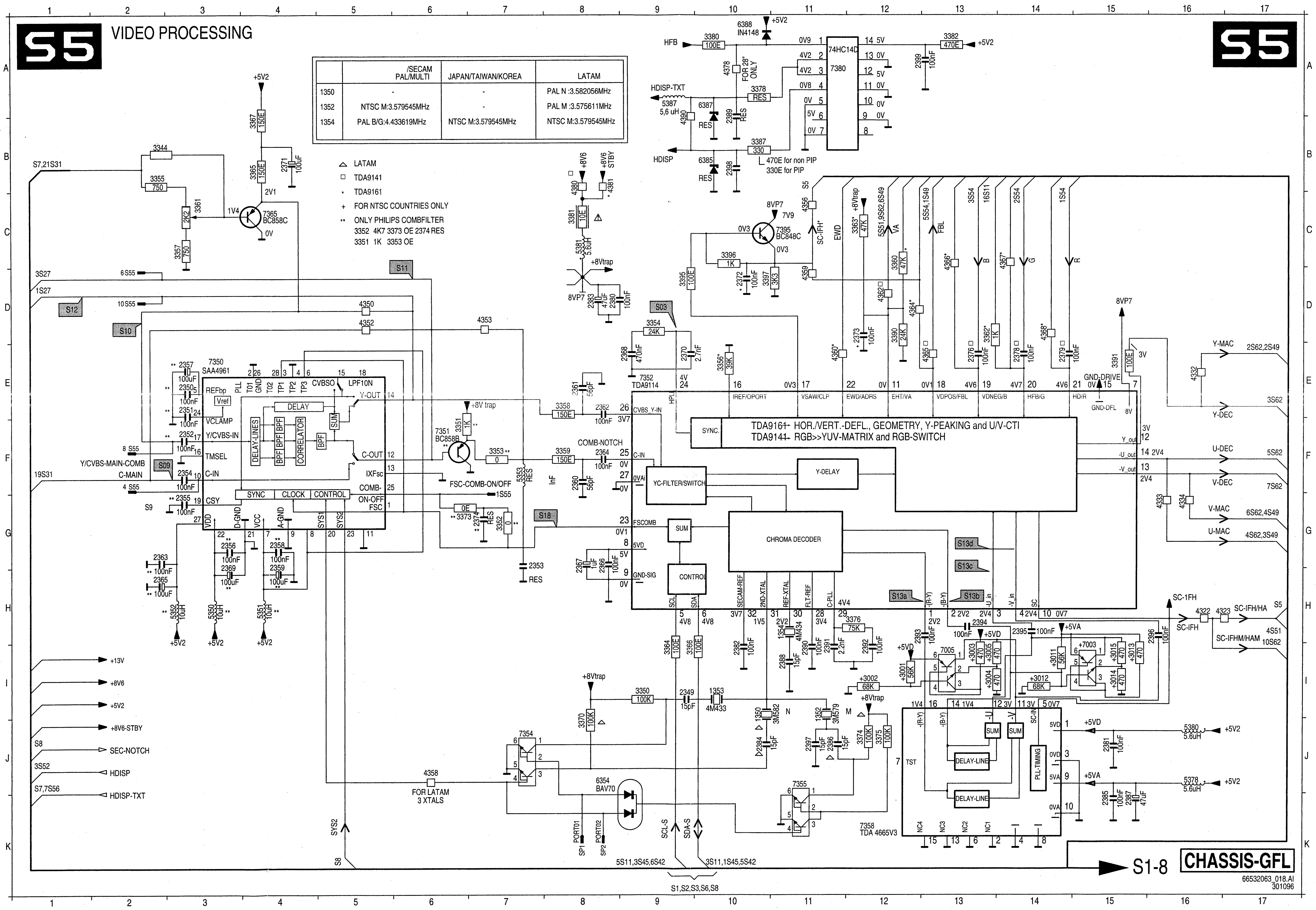

S1
TUNER
Only Hongkong FV916
470K FOR 9,2V AGC EG UV916
330K FOR 7,5V AGC EG UV936
SP-GAIN
+5V2
+13V
+40V
GND-LIGHTNING
ANT-TERR
AUD1-TERR
AUD2-TERR
MAC-KEY
CVBS
FQ916(D)MF
FQ916 MR
FV916 M6
FQ936 D
FS908
FQ944D
FQ916(D)ME
GND
IF
IF/VTI
SIF
AFC
RF-AGC
STROBE
STR-FE
VTI-TERR
IF1
IF2
AGC
ADC
+33V
SCL
SDA
BC848
BC848C
BC858
BAS16
BZX384C33
CHASSIS-GFL
S1-8
S1.eps
241097


S2
STEREODECODER
AUD1-TERR
AUD2-TERR
7600
TDA9840
LEVEL & STEREO ADJUSTMENT
STEREO/DUAL SOUND DECODER
DIGITAL PLL AND DEMODULATOR
DIGITAL INTEGRATOR DUAL bit
DIGITAL INTEGRATOR STEREO bit
DIGITAL PLL
I2C BUS CONTROL
OSCILL
REFERENCE VOLTAGE
CONTROL LOGIC
MUTE
L-2CS
R-2CS
SCL-S
SDA-S
CHASSIS GFL
S1-8
S2.eps
281097


S3
SOUND PROCESSING
10E only for Dolby sets
R-MAIN-F
L-MAIN-F
L-MAIN
R-MAIN
L-HP-SS
R-HP-SS
R-HP-SS-F
L-HP-SS-F
TDA9860
7650
INP-L
INP-R
AUX-L
AUX-R
OUT-L
OUT-R
HP-OUTL
HP-OUTR
SCART-R
SCART-L
R-PRC-F
L-PRC-F
L-PRC
R-PRC
L-HP-OUT-F
L-HP-OUT
R-HP-OUT-F
R-HP-OUT
R-CL/VL-PRC-F
R-CL/VL-PRC
L-CL/VL-PRC
L-CL/VL-PRC-F
LOG-IN
INCREDIBLE STEREO PANEL
A Y
CHASSIS GFL
S1-8
CL 66532063_017.A1
151096


S4
HEADPHONES AMPLIFIER
L-HP-OUT
R-HP-OUT
7710
TDA2822M
L-HP-AMP
R-HP-AMP
+5STANDBY
SOUND-ENABLE
L-CL/VL-PRC
R-CL/VL-PRC
BC848C
BC858C
CHASSIS-GFL
S1-8
CL 66532063_023.A1
151096

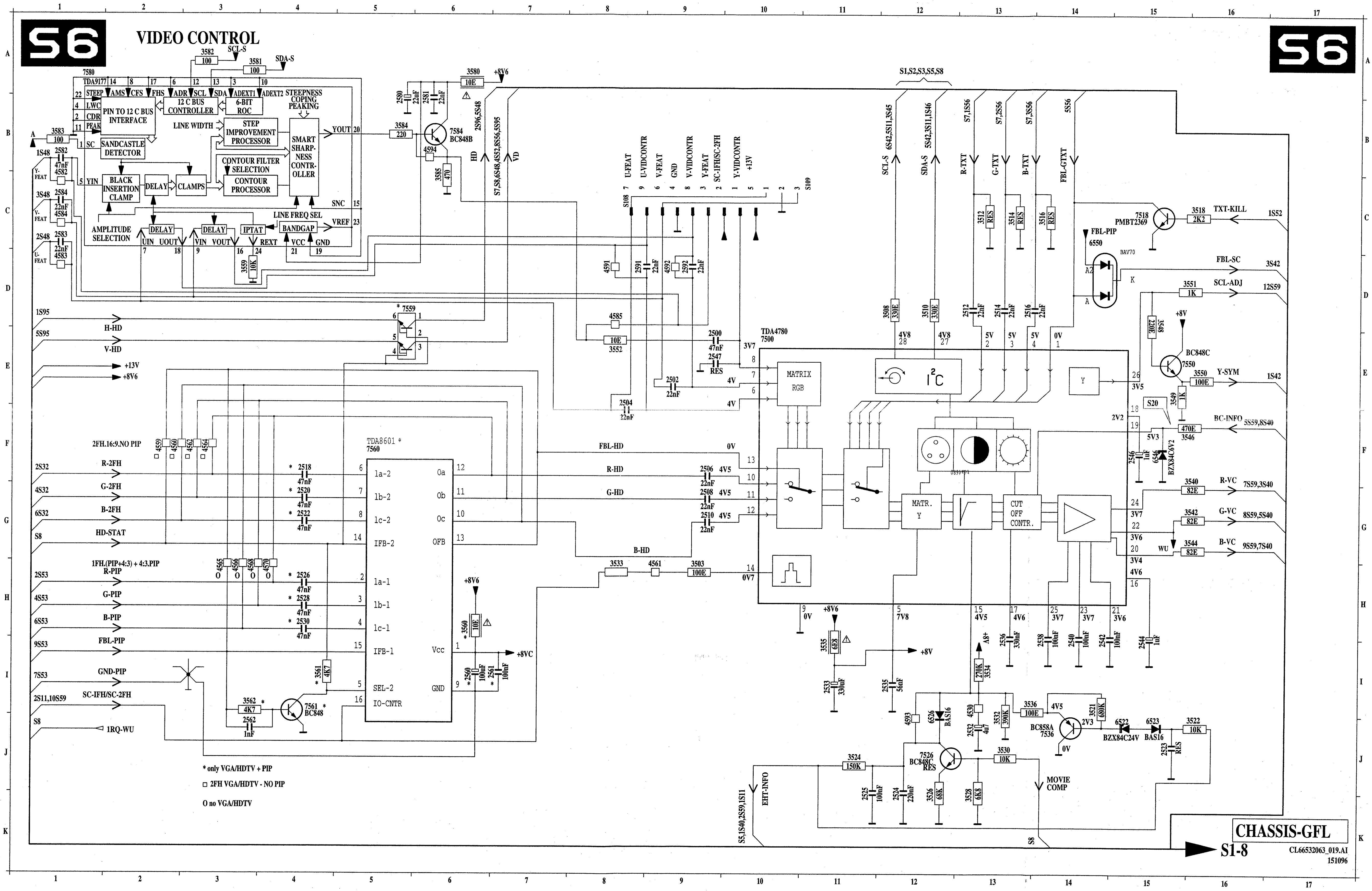
Video processing


S5
VIDEO PROCESSING
7350 SAA4961
DELAY-LINES
CORRELATOR
SYNC CLOCK CONTROL
7352 TDA9114
TDA9161 HOR./VERT.-DEFL., GEOMETRY, Y-PEAKING and U/V-CTI
TDA9141 RGB>>YUV-MATRIX and RGB-SWITCH
YC-FILTER/SWITCH
Y-DELAY
CHROMA DECODER
7380 74HC14D
7358 TDA 4665V3
DELAY-LINE
PLL-TIMING
7365 BC858C
7395 BC848C
7351 BC858B
6354 BAV70
Y-MAC
Y-DEC
U-DEC
V-DEC
V-MAC
U-MAC
SC-IFH
SC-IFHM/HAM
HFB
HDISP-TXT
HDISP
+13V
+8V6
+5V2
+8V6-STBY
SEC-NOTCH
Y/CVBS-MAIN-COMB
C-MAIN
FSC-COMB-ON/OFF
FOR LATAM 3 XTALS
S1-8
CHASSIS-GFL
66532063_018.AI 301096

	/SECAM PAL/MULTI	JAPAN/TAIWAN/KOREA	LATAM
1350	-	-	PAL N :3.582056MHz
1352	NTSC M:3.579545MHz	-	PAL M :3.575611MHz
1354	PAL B/G:4.433619MHz	NTSC M:3.579545MHz	NTSC M:3.579545MHz

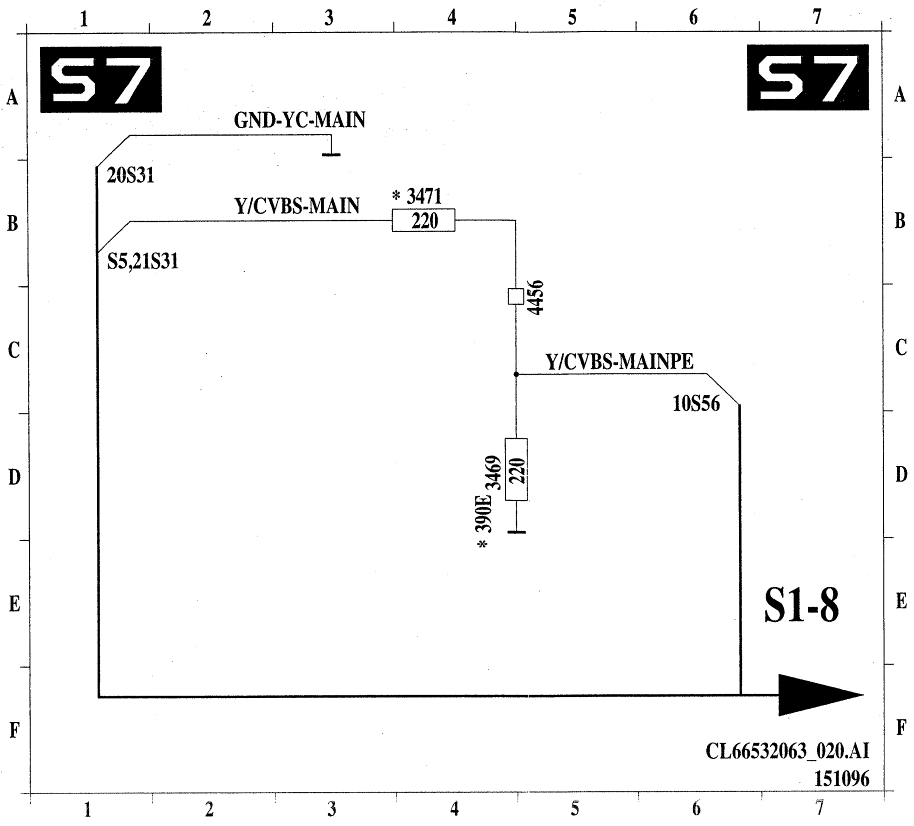
△ LATAM
□ TDA9141
• TDA9161
+ FOR NTSC COUNTRIES ONLY
** ONLY PHILIPS COMBFILTER
3352 4K7 3373 OE 2374 RES
3351 1K 3353 OE

1350	I10
1352	I11
1353	I10
1354	H11
2349	I 9
2353	G 7
2354	H 3
2360	F 8
2361	E 8
2362	E 8
2364	F 8
2366	G 8
2367	G 8
2368	E 9
2370	E 9
2371	F 4
2372	D10
2373	D12
2374	G 7
2376	E13
2378	E14
2379	E14
2380	D 8
2381	I15
2382	I10
2383	D 8
2384	J10
2385	J15
2386	J11
2387	J15
2388	I11
2389	A10
2390	I11
2391	I11
2392	I12
2393	H12
2394	H13
2395	H14
2396	H14
2397	J11
2398	B10
2399	A12
3001	I12
3002	I12
3003	I13
3004	I13
3005	I13
3011	I14
3012	I14
3013	I15
3014	I15
3015	I15
3344	B2
3350	F6
3351	B10
3352	G 8
3353	F 6
3354	D 9
3355	F 2
3356	E10
3357	G 3
3358	E 8
3359	F 8
3360	C12
3361	F 3
3362	D13
3363	C12
3364	I 9
3365	F 4
3366	I 9
3367	E 4
3370	J 8
3373	G 7
3374	J12
3375	J12
3376	H12
3378	A10
3380	A10
3381	C 8
3382	A13
3387	B10
3390	D12
3391	E15
3392	F16
3393	E16
3395	D 9
3396	C10
3397	D10
4322	H15
4323	H16
4332	E16
4333	G16
4334	G16
4353	F 7
4354	F 2
4355	I 5
4356	C11
4357	I 5
4359	C11
4360	E11
4362	D12
4364	D12
4365	E13
4366	C13
4367	C14
4368	D14
4365	E13
4378	A10
4381	B 8
5353	F7
5378	J15
5380	I15
5381	C 8
5387	A 9
6354	K 9
6385	B10
6387	B10
6388	A10
7005	I13
7351	F7
7352	E 9
7354	J 7
7355	J10
7356	J12
7358	K12
7365	G 4
7380	A11
7390	D15
7395	C11
S55	F 6
S55	E 6
S55	G 6
S55	I 6
S55	H 5
S55	F 5
S55	H 5
S55	J 5
S55	J 5
S55	I 5

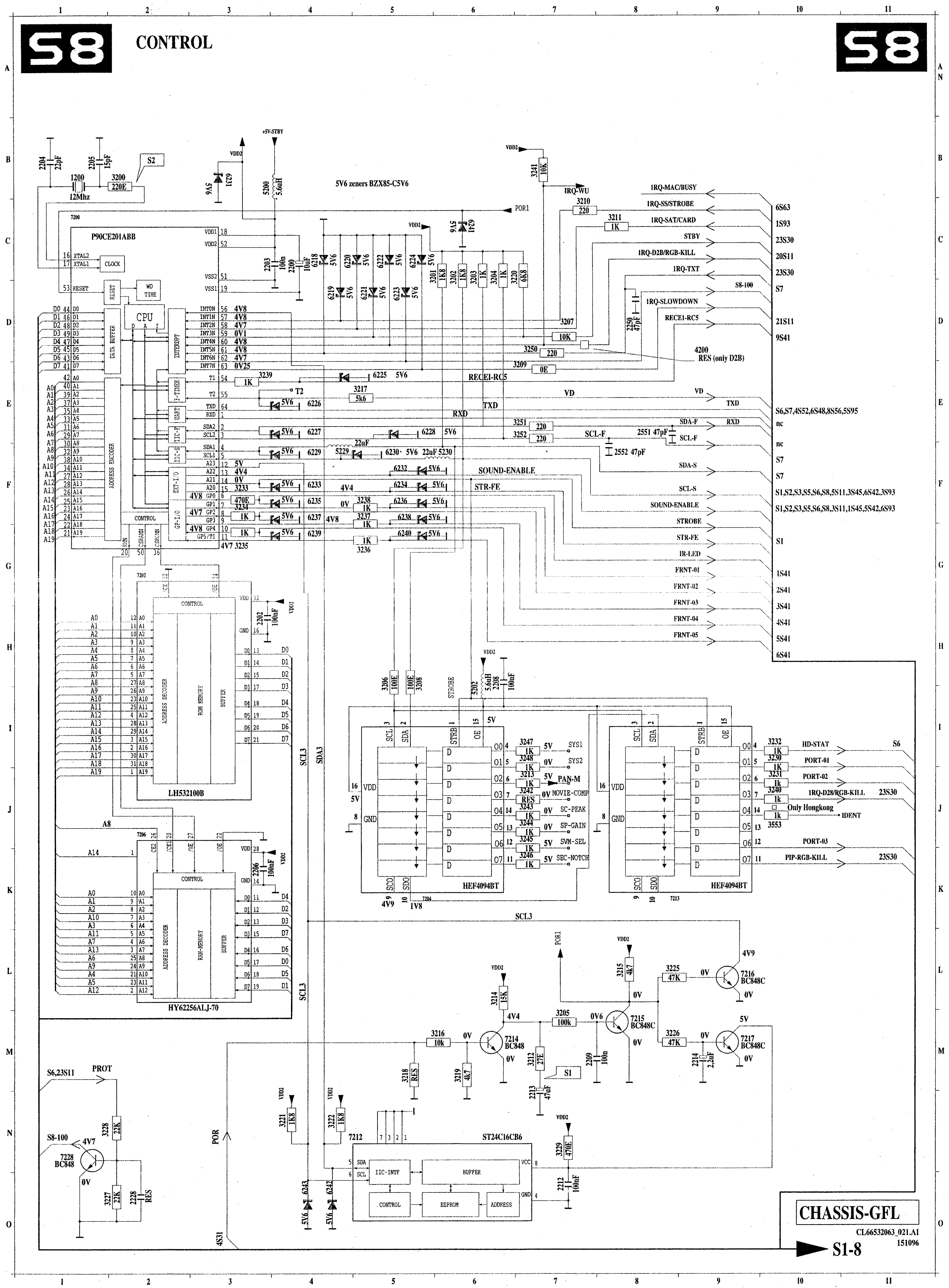

S6
VIDEO CONTROL
TDA9177
7580
PIN TO 12 C BUS INTERFACE
12 C BUS CONTROLLER
6-BIT ROC
STEEPNESS COPING PEAKING
STEP IMPROVEMENT PROCESSOR
SMART SHARPNESS CONTROLLER
SANDCASTLE DETECTOR
BLACK INSERTION CLAMP
DELAY
CLAMPS
CONTOUR FILTER SELECTION
CONTOUR PROCESSOR
AMPLITUDE SELECTION
LINE FREQ SEL
BANDGAP
IPTAT
LINE WIDTH
YOUT
SNC
VREF
SCL-S
SDA-S
7584
BC848B
+8V6
1S95
5S95
H-HD
V-HD
+13V
+8V6
7559
TDA8601 *
7560
2FH.16:9.NO PIP
R-2FH
G-2FH
B-2FH
HD-STAT
1FH.(PIP+4:3) + 4:3.PIP
R-PIP
G-PIP
B-PIP
FBL-PIP
GND-PIP
SC-IFH/SC-2FH
1RQ-WU
7561
BC848
+8VC
* only VGA/HDTV + PIP
□ 2FH VGA/HDTV - NO PIP
O no VGA/HDTV
U-FEAT
U-VIDCONTR
V-FEAT
GND
V-VIDCONTR
Y-FEAT
SC-1FH/SC-2FH
Y-VIDCONTR
+13V
S108
S109
TDA4780
7500
MATRIX RGB
I²C
MATR. Y
CUT OFF CONTR.
FBL-HD
R-HD
G-HD
B-HD
S1,S2,S3,S5,S8
R-TXT
G-TXT
B-TXT
FBL-GTXT
TXT-KILL
7518
PMBT2369
FBL-PIP
6550
BAV70
FBL-SC
SCL-ADJ
7550
BC848C
Y-SYM
BC-INFO
R-VC
G-VC
B-VC
WU
7526
BC848C
7536
BC858A
BZX84C24V
BAS16
MOVIE COMP
EHT-INFO
+8V
S8
CHASSIS-GFL
S1-8
CL66532063_019.AI
151096

2500	E 9
2502	E 9
2504	E 8
2506	F 9
2508	G 9
2510	G 9
2512	D13
2514	D13
2516	D13
2518	F 4
2520	G 4
2522	G 4
2523	J15
2524	J12
2525	J11
2526	H 4
2528	H 4
2530	H 4
2532	J13
2533	I11
2535	I12
2536	H13
2538	H14
2540	H14
2542	H14
2544	H15
2546	F15
2547	E 9
2560	I 6
2561	I 7
2566	C 4
2582	B 1
2583	C 1
2584	C 1
3503	H 9
3508	D12
3510	D12
3512	C13
3514	C13
3516	C14
3518	C16
3521	I14
3522	J16
3524	J11
3525	J 9
3526	J12
3528	J13
3530	J13
3532	I13
3534	I13
3535	I11
3536	I14
3540	F16
3542	G16
3544	G16
3546	F16
3548	D15
3549	E15
3550	E16
3551	D16
3552	E 8
3553	H 8
3556	D 5
3558	E 5
3559	D 3
3560	H 6
3561	I 4
3562	I 3
3565	B 5
3566	B 4
3567	C 4
3568	B 3
3569	C 3
3570	C 5
3571	C 5
3569	C 3
3570	C 5
3571	C 5
3581	A 3
3582	A 3
3583	B 1
4561	H 9
4562	F 3
4564	F 3
4565	H 3
4566	H 3
4568	H 3
4570	H 4
4582	C 1
4583	D 1
4584	C 1
4593	I12
6522	J15
6523	J15
6526	I12
6527	J10
6546	F15
6550	C14
7500	E10
7518	C15
7526	J12
7536	J14
7550	E15
7556	D 6
7558	E 6
7560	F 5
7561	I 4
7566	C 5
7567	C 4
7568	B 3
7580	A 1
S99	C 8

Control

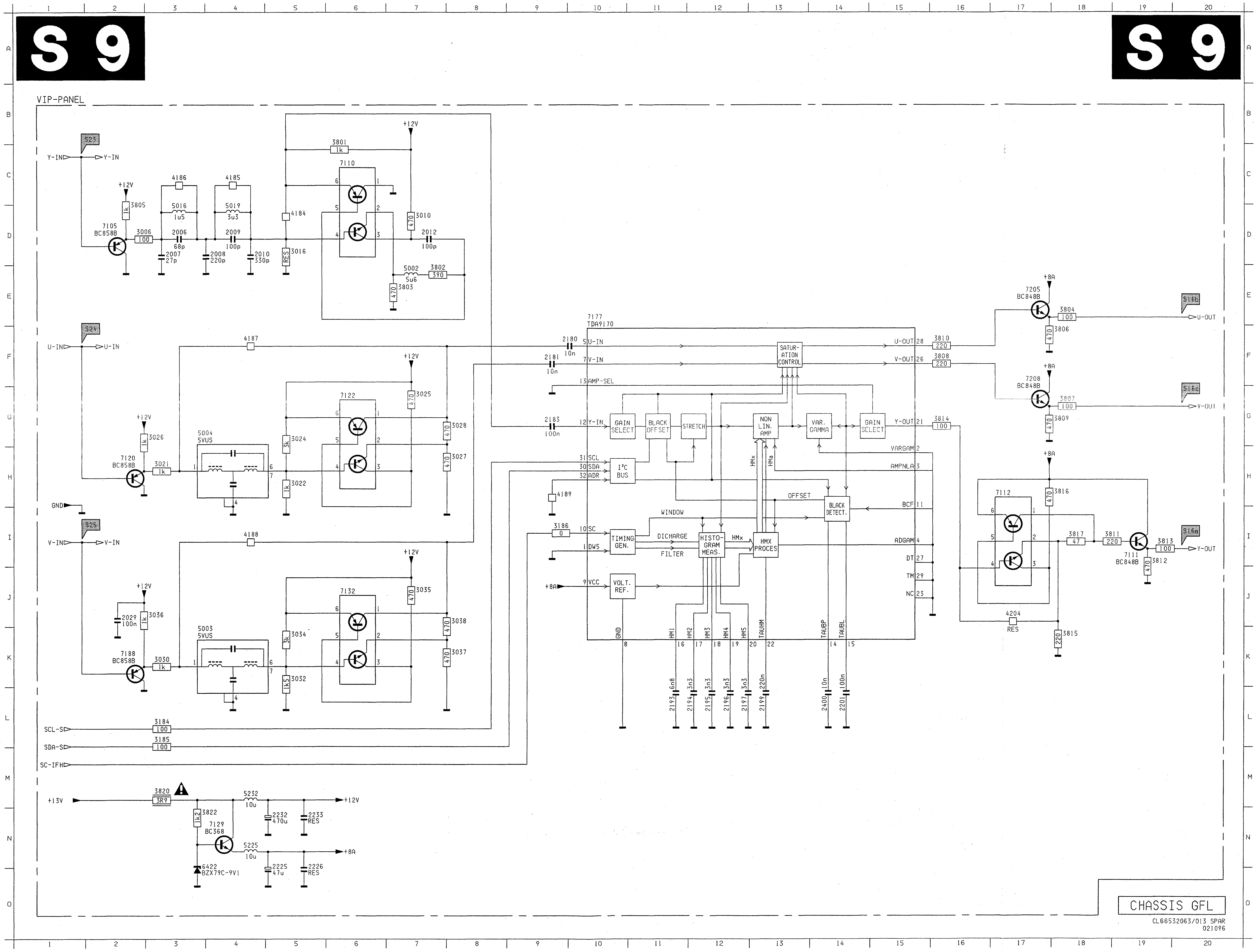

S7
GND-YC-MAIN
20S31
Y/CVBS-MAIN
* 3471
220
S5,21S31
4456
Y/CVBS-MAINPE
10S56
3469
220
* 390E
S1-8
CL66532063_020.AI
151096

3469	D 4
3471	B4
4456	C5


S8
CONTROL
P90CE201ABB
CPU
LH532100B
HY62256ALJ-70
HEF4094BT
ST24C16CB6
5V6 zeners BZX85-C5V6
IRQ-MAC/BUSY
IRQ-SS/STROBE
IRQ-SAT/CARD
STBY
IRQ-D2B/RGB-KILL
IRQ-TXT
IRQ-SLOWDOWN
RECEI-RC5
RES (only D2B)
SOUND-ENABLE
STR-FE
STROBE
IR-LED
FRNT-01
FRNT-02
FRNT-03
FRNT-04
FRNT-05
HD-STAT
PORT-01
PORT-02
Only Hongkong
IDENT
PORT-03
PIP-RGB-KILL
SYS1
SYS2
PAN-M
MOVIE-COMP
SC-PEAK
SP-GAIN
SVM-SEL
SEC-NOTCH
SCL3
SDA3
PROT
POR
BC848C
BC848
CHASSIS-GFL
S1-8
CL66532063_021.AI
151096

1200	B 1
2200	C 4
2202	H 3
2203	C 3
2204	B 1
2205	B 1
2206	K 3
2208	H 6
2209	M 7
2212	O 7
2213	M 7
2214	M 9
2228	O 2
2250	D 8
2251	E 8
2252	E 7
3200	B 2
3201	C 6
3202	C 6
3203	C 6
3204	C 6
3205	M 7
3206	H 5
3207	D 7
3208	H 5
3209	E 7
3210	C 7
3211	C 8
3212	M 7
3213	J 7
3214	L 6
3215	L 8
3216	M 6
3217	E 5
3218	M 5
3219	M 6
3220	C 7
3221	N 4
3222	N 4
3225	L 8
3226	M 8
3227	O 2
3228	N 1
3229	N 7
3230	I10
3231	J10
3232	I10
3233	F 3
3234	F 3
3235	G 3
3236	G 5
3237	F 5
3238	F 5
3239	E 3
3240	J10
3241	B 7
3242	J 7
3243	J 7
3244	J 7
3245	J 7
3246	K 7
3247	I 7
3248	I 7
3250	D 7
3251	E 7
3252	E 7
3553	J 10
4200	D 7
5200	B 3
5202	H 6
5229	F 4
5230	F 6
6218	C 4
6219	D 4
6220	C 4
6221	D 5
6222	C 5
6223	D 5
6224	C 5
6225	E 5
6226	E 4
6227	E 4
6228	E 5
6229	F 4
6230	F 5
6231	B 3
6232	F 5
6233	F 4
6234	F 5
6235	F 4
6236	F 5
6237	F 4
6238	F 5
6239	G 4
6240	G 5
6241	C 6
6242	O 4
6243	O 4
7200	C 1
7202	G 2
7204	K 5
7206	J 2
7212	N 4
7213	K 8
7214	M 6
7215	M 8
7216	L 9
7217	M 9
7228	N 1

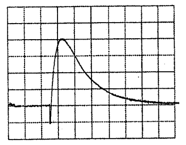
VIP panel


S 9
S 9
VIP-PANEL
S23
Y-IN
Y-IN
S24
U-IN
U-IN
GND
S25
V-IN
V-IN
SCL-S
SDA-S
SC-IFH
+13V
+12V
+8A
3820
3R9
5232
10u
2232
470u
2233
RES
3822
1k2
7129
BC368
5225
10u
2225
47u
2226
RES
6422
BZX79C-9V1
7105
BC858B
3805
1k
3006
100
4186
4185
5016
1u5
5019
3u3
2006
68p
2007
27p
2008
220p
2009
100p
2010
330p
4184
3016
RES
3801
1k
7110
3010
470
2012
100p
5002
5u6
3802
390
3803
470
7120
BC858B
3026
1k
3021
1k
5004
5VUS
4187
3024
3k
3022
1k
7122
3025
470
3028
470
3027
470
7188
BC858B
3036
1k
2029
100n
3030
1k
5003
5VUS
4188
3034
3k
3032
1k5
7132
3035
470
3038
470
3037
470
3184
100
3185
100
3186
0
4189
2180
10n
2181
10n
2183
100n
7177
TDA9170
U-IN
V-IN
AMP-SEL
Y-IN
SCL
SDA
ADR
SC
DWS
VCC
GND
HM1
HM2
HM3
HM4
HM5
TAUHM
TAUBP
TAUBL
GAIN SELECT
BLACK OFFSET
STRETCH
NON LIN. AMP
VAR. GAMMA
GAIN SELECT
SATUR-ATION CONTROL
I²C BUS
TIMING GEN.
DICHARGE
FILTER
WINDOW
OFFSET
HISTO-GRAM MEAS.
HMx
HMa
HMX PROCES
BLACK DETECT.
VOLT. REF.
U-OUT
V-OUT
Y-OUT
VARGAM
AMPNLA
BCF
ADGAM
DT
TM
NC
2193 6n8
2194 3n3
2195 3n3
2196 3n3
2197 3n3
2199 220n
2400 10n
2201 100n
3810
220
3808
220
3814
100
7205
BC848B
3804
100
3806
470
7208
BC848B
3807
100
3809
470
S16b
U-OUT
S16c
V-OUT
7112
3816
470
3817
47
3811
220
7111
BC848B
3813
100
3812
470
S16a
Y-OUT
4204
RES
3815
220
CHASSIS GFL
CL66532063/013 SPAR
021096

2006	D 3
2007	D 3
2008	D 4
2009	D 4
2010	D 4
2012	D 7
2029	J 2
2180	F10
2181	F 9
2183	G 9
2193	L11
2194	L12
2195	L12
2196	L12
2197	L12
2199	L13
2201	L14
2225	O 5
2226	O 5
2232	N 5
2233	N 5
2400	L14
3006	D 2
3010	D 7
3016	D 5
3021	H 3
3022	H 5
3024	G 5
3025	G 7
3026	G 3
3027	H 8
3028	G 8
3030	K 3
3032	K 5
3034	K 5
3035	J 7
3036	J 3
3037	K 8
3038	J 8
3184	L 3
3185	L 3
3186	I 9
3801	C 6
3802	E 7
3803	E 7
3804	E18
3805	C 2
3806	F18
3807	G18
3808	F16
3809	G18
3810	F16
3811	I18
3812	I19
3813	I19
3814	G16
3815	K18
3816	H18
3817	I18
3820	M 3
3822	N 3
4184	D 5
4185	C 4
4186	C 3
4187	F 4
4188	I 4
4189	H 9
4204	J17
5002	E 7
5003	K 3
5004	G 3
5016	D 3
5019	D 4
5225	N 4
5232	M 4
6422	O 3
7105	D 2
7110	C 6
7111	I19
7112	H17
7120	H 2
7122	G 6
7129	N 4
7132	J 6
7177	E10
7188	K 2
7205	E17
7208	F17

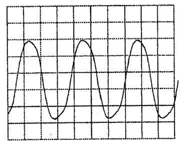
Oscillograms

S1



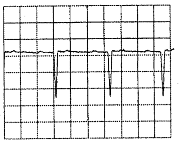
200mV/div
0.5s/div

S2



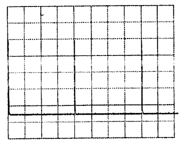
1V/div
0.2mV/div

S3



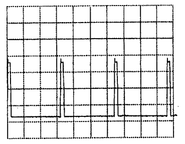
50mV/div
20µs/div

S4a



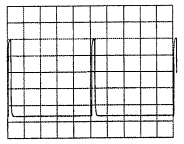
1V/div
5ms/div

S4b



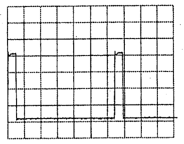
1V/div
20µs/div

S5a



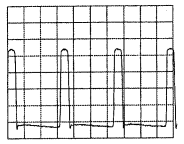
1V/div
2ms/div

S5b



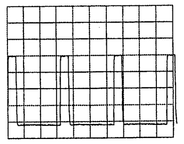
1V/div
5µs/div

S6



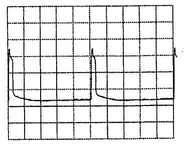
1V/div
10µs/div

S7



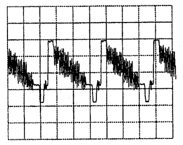
1V/div
10µs/div

S8



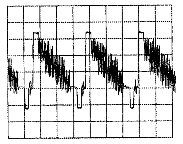
5V/div
2ms/div

S9



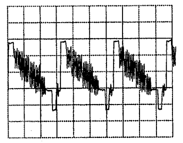
500mV/div
20µs/div

S10



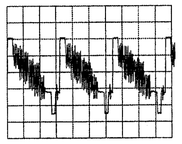
200mV/div
20µs/div

S11



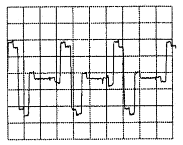
200mV/div
20µs/div

S12



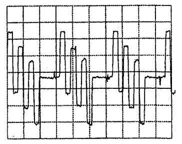
200mV/div
20µs/div

S13a



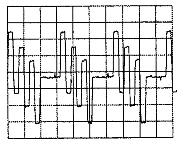
100mV/div
20µs/div

S13b



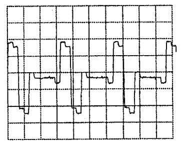
100mV/div
20µs/div

S13c



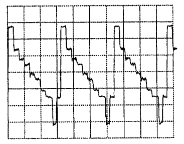
200mV/div
20µs/div

S13d



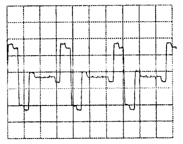
200mV/div
20µs/div

S14a



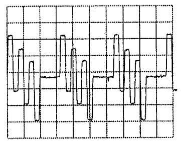
200mV/div
20µs/div

S14b



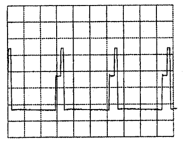
200mV/div
20µs/div

S14c



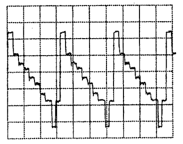
200mV/div
20µs/div

S15



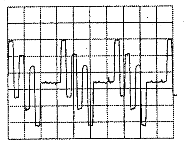
1mV/div
20µs/div

S16a



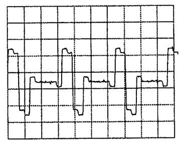
200mV/div
20µs/div

S16b



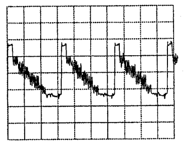
200mV/div
20µs/div

S16c



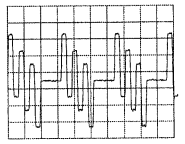
200mV/div
20µs/div

S17a



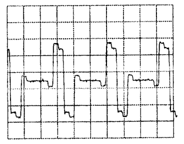
100mV/div
10µs/div

S17b



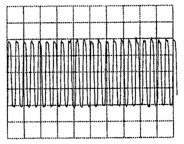
200mV/div
10µs/div

S17c



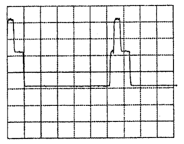
200mV/div
10µs/div

S18



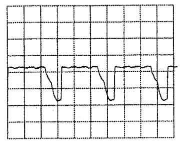
50mV/div+4DC
0.5µs/div

S19



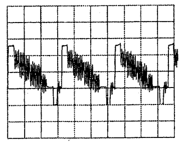
1V/div
5µs/div

S20



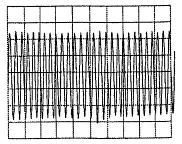
2V/div
10µs/div

S21



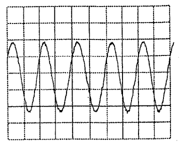
500mV/div
20µs/div

S22



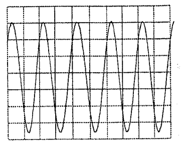
50mV/div
0.5µs/div

S26



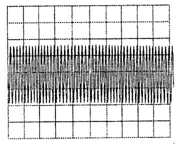
200mV/div
0.5µs/div

S27



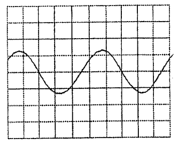
200mV/div
0.5µs/div

S29



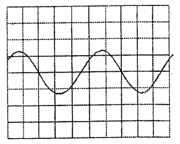
100mV/div
0.5µs/div

S30a



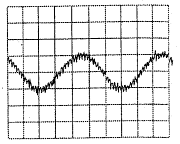
500mV/div
0.2ms/div

S30b



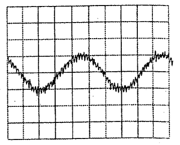
500mV/div
0.2ms/div

S31a



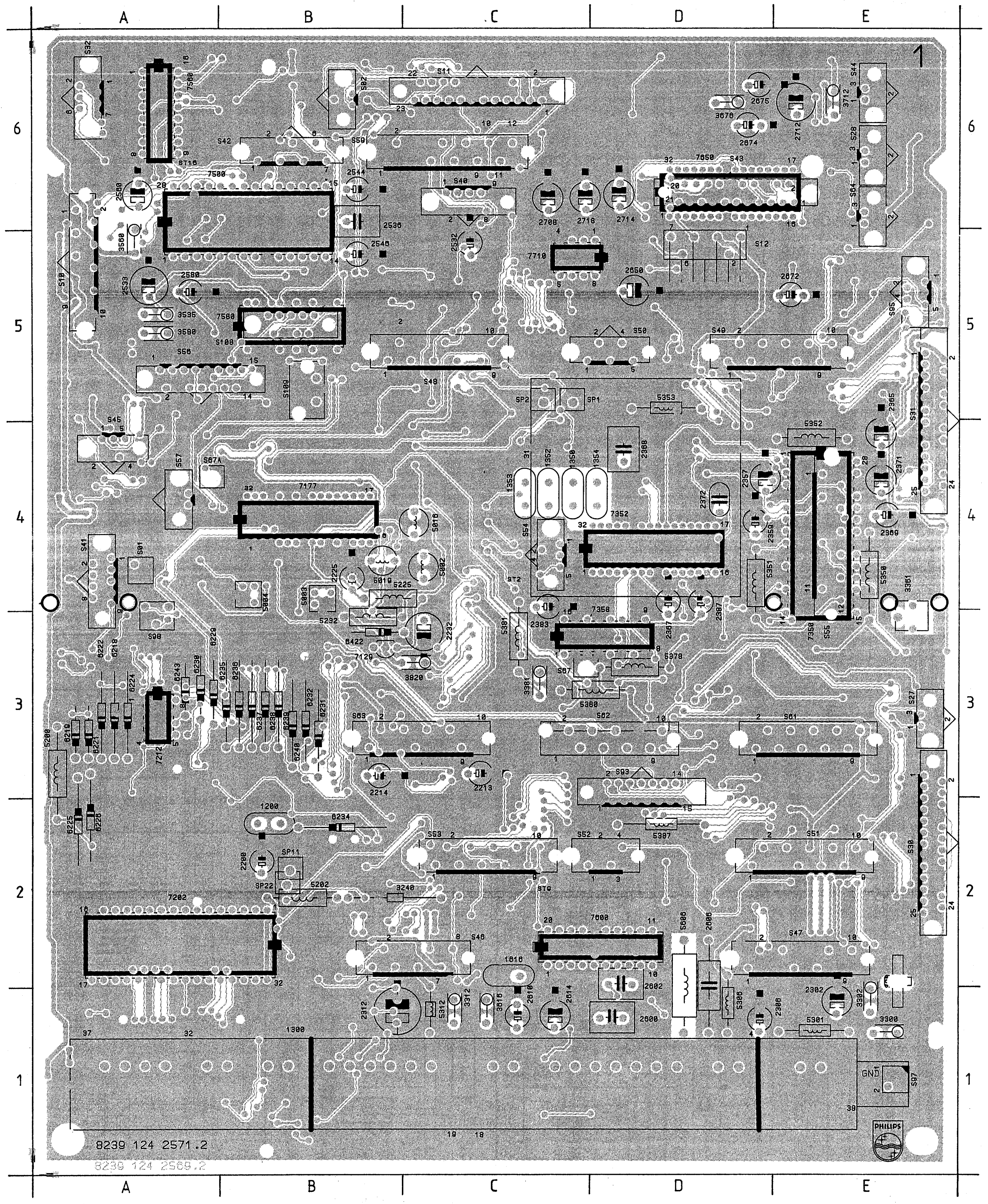
500mV/div
0.2ms/div

S31b

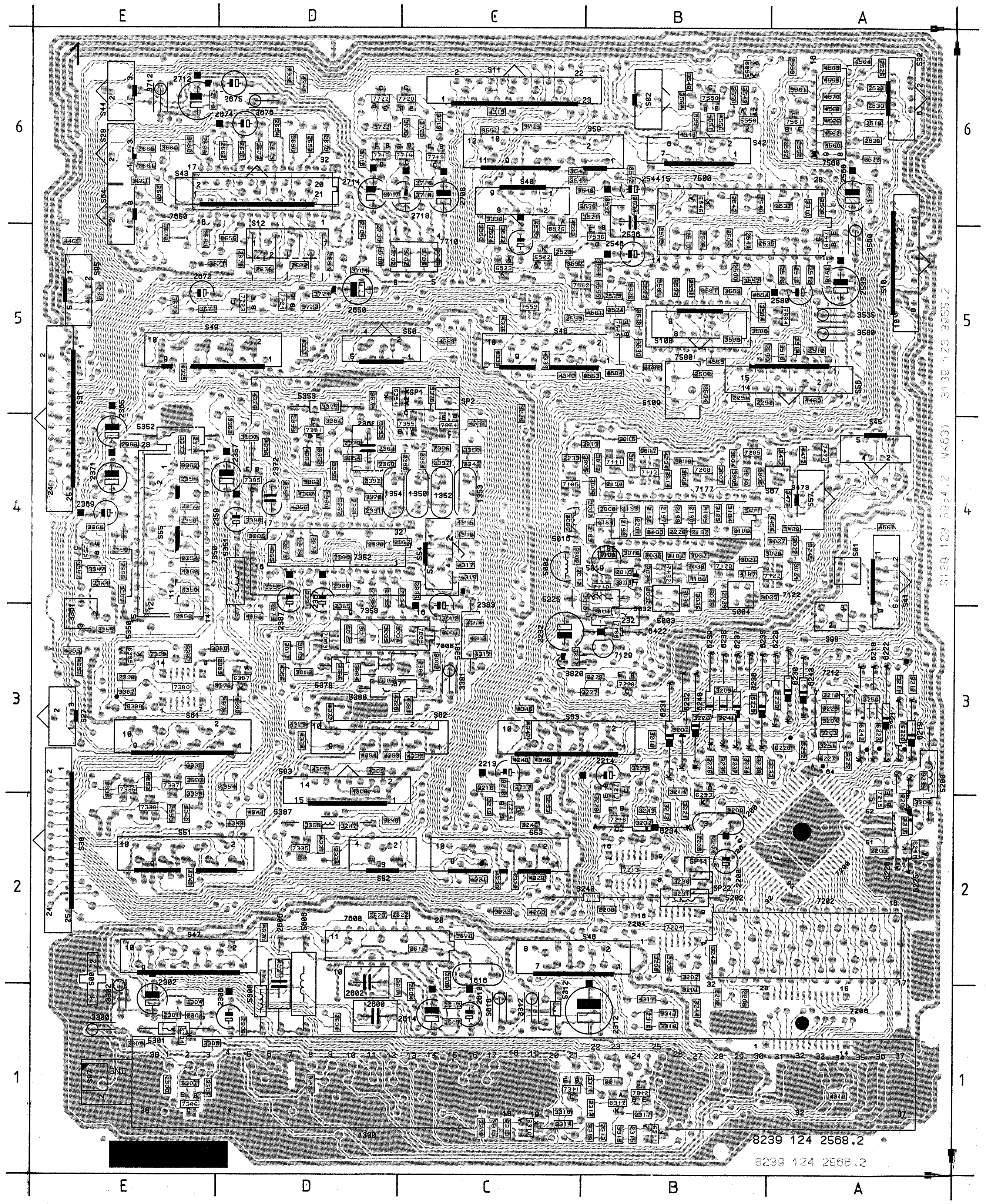


500mV/div
0.2ms/div

Small signal panel



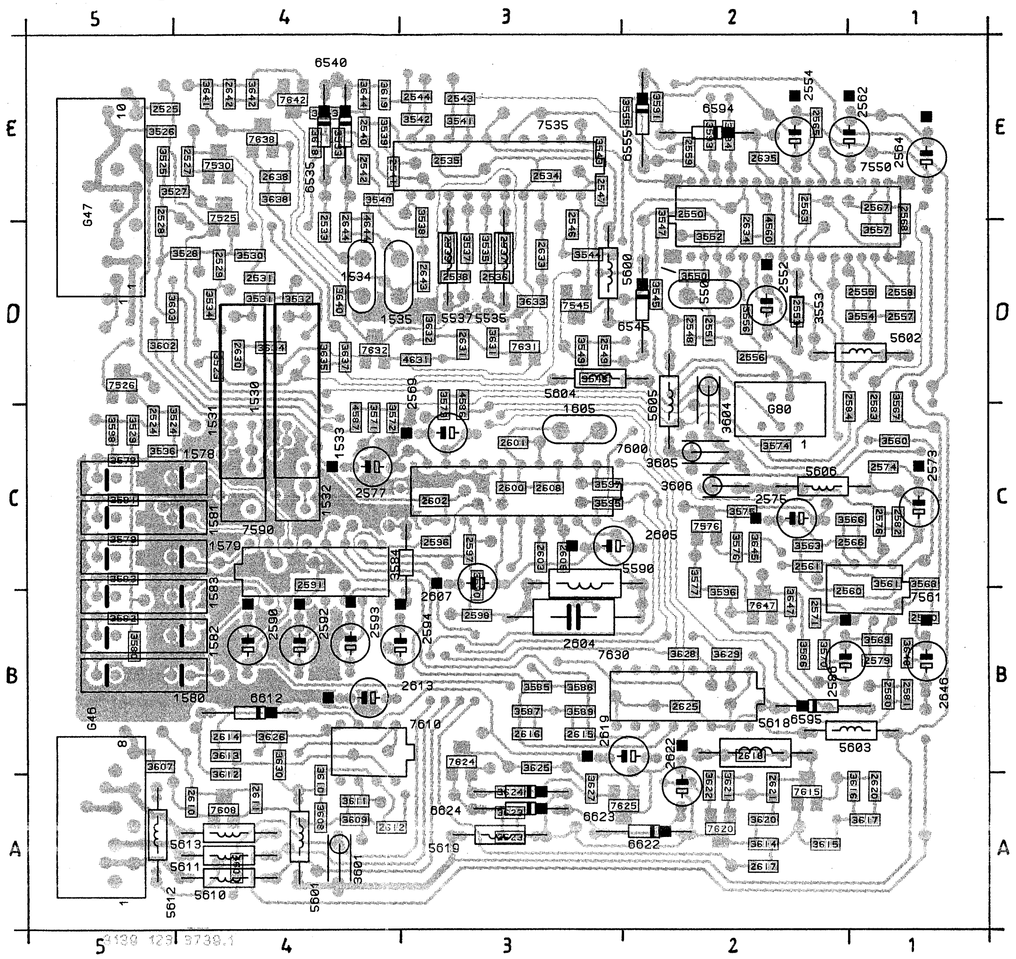
Small signal panel

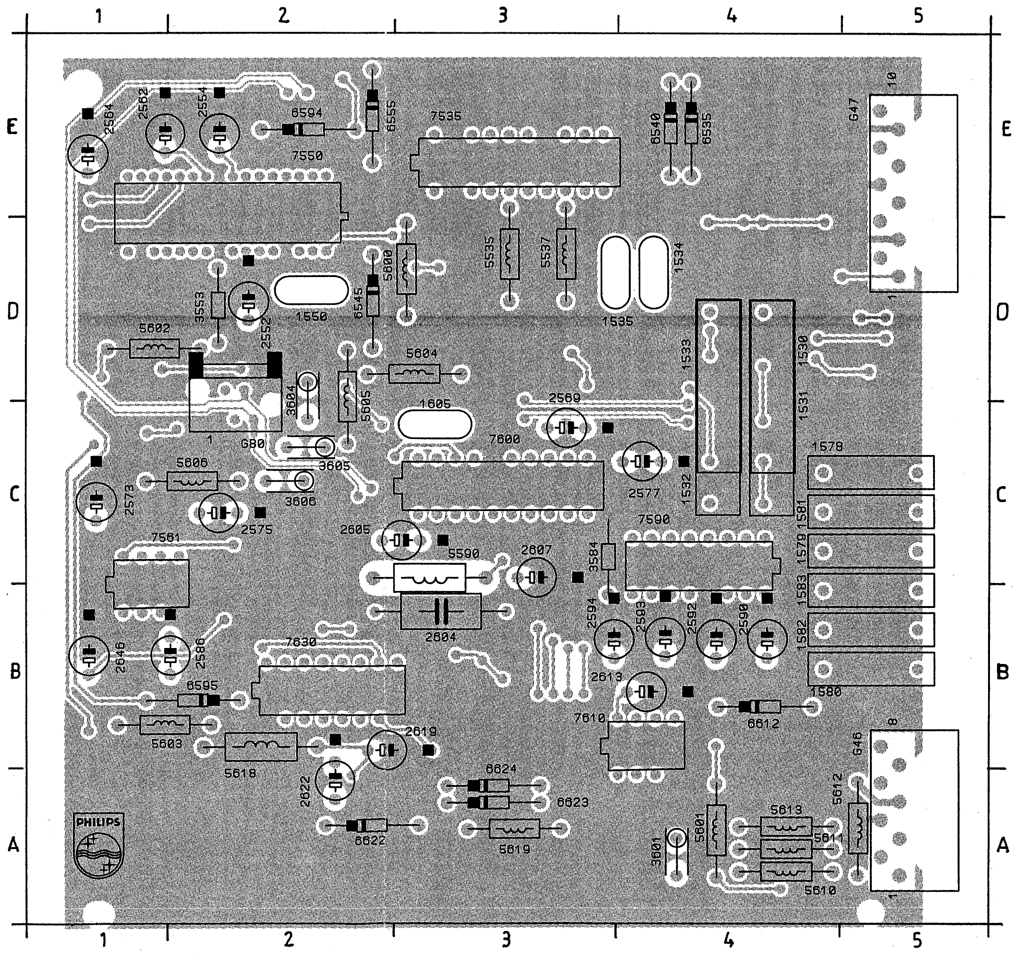


Small signal panel

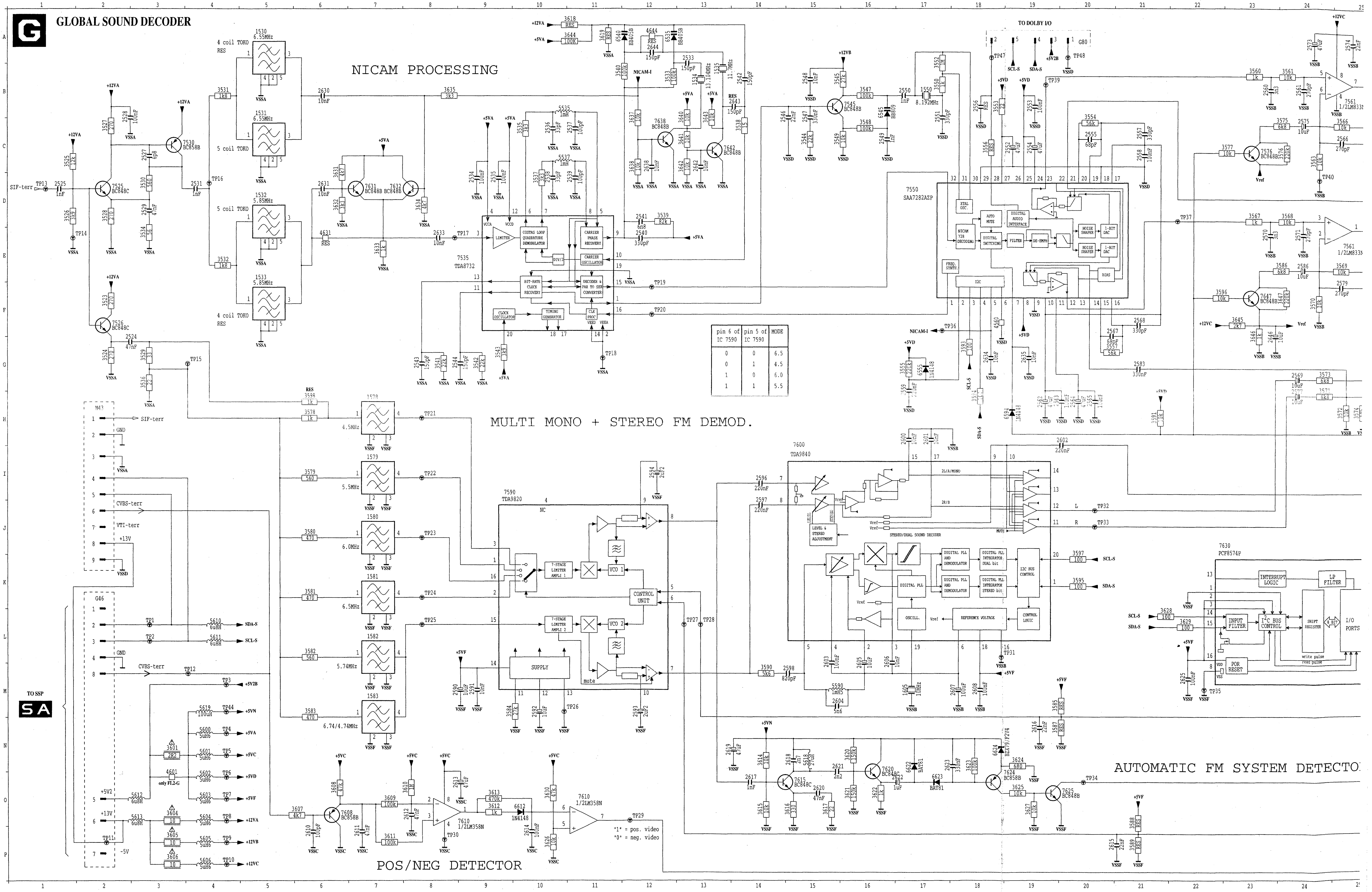
1200	B2
1300	C1
1350	C4
1352	C4
1353	C4
1354	D4
1616	C2
2006	C4
2007	B4
2008	B4
2009	B4
2010	B4
2012	C4
2029	B4
2180	B4
2181	B4
2183	B4
2190	B4
2192	B4
2193	B4
2194	B4
2195	B4
2196	B4
2197	B4
2199	B4
2200	B2
2201	B4
2202	B1
2203	A2
2204	B2
2205	B2
2206	B1
2208	B2
2209	A3
2212	A3
2213	C3
2214	B3
2225	B4
2226	B4
2228	B3
2232	C3
2233	C4
2250	B5
2251	B5
2252	B5
2300	E1
2301	E1
2302	E1
2304	E1
2306	D1
2308	D1
2310	C1
2311	B1
2312	B1
2313	B1
2314	B1
2315	B1
2316	B1
2317	B1
2349	C4
2350	E4
2351	E4
2352	E4
2353	D5
2354	E4
2355	E4
2356	E4
2357	D4
2358	E4
2359	D4
2360	D4
2361	D4
2362	D4
2363	E4
2364	D4
2365	E5
2366	D4
2367	D4
2368	D4
2369	E4
2370	D4
2371	E4
2372	D4
2373	D4
2374	E4
2376	D4
2378	D4
2379	D4
2380	D4
2381	C3
2382	D4
2383	C4
2384	C4
2385	D4
2386	C4
2387	D4
2388	C4
2389	D3
2390	D4
2391	D4
2392	D4
2393	C4
2394	D4
2395	D4
2396	D4
2397	C4
2398	E3
2399	E3
2400	B4
2500	B5
2502	B5
2504	B5
2506	B6
2508	B6
2510	B6
2512	A5
2514	A5
2516	A5
2518	A6
2520	A6
2522	A6
2523	C6
2524	B5
2525	B5
2526	A7
2528	A6
2530	A6
2532	C6
2533	A5
2535	B6
2536	B6
2538	A6
2540	B6
2542	B6
2544	B6
2546	B6
2547	B6
2560	A6
2561	A6
2562	A6
2580	A5
2581	B5
2582	B5
2583	B5
2584	B5
2591	B5
2592	B5
2600	D1
2601	D1
2602	D2
2604	C1
2606	D2
2608	C1
2610	C1
2612	C1
2614	C1
2616	C2
2620	D2
2622	D2
2650	D5
2652	D6
2654	D6
2656	D6
2658	D6
2660	E6
2661	E6
2662	D6
2665	E6
2666	E6
2668	E6
2671	D5
2672	E5
2673	D6
2674	D6
2675	D6
2676	D5
2678	D6
2680	D6
2682	D5
2684	D5
2700	D6
2702	D5
2704	D6
2706	C5
2708	C6
2710	E6
2712	E6
2714	D6
2718	C6
3001	C3
3002	C4
3003	C3
3004	D3
3005	D3
3006	B4
3010	C4
3011	D3
3012	D3
3013	D3
3014	D3
3015	D3
3016	B4
3021	B4
3022	A4
3024	A4
3025	B4
3026	B4
3027	A4
3028	A4
3030	B4
3032	B4
3034	B4
3035	B4
3036	B4
3037	B4
3038	B4
31	D4
3184	B4
3185	B4
3186	D3
3200	B2
3201	B2
3202	B2
3203	A3
3204	A3
3205	A3
3206	B2
3207	B3
3208	B2
3209	B3
3210	B3
3211	A3
3212	C3
3213	B2
3214	B3
3215	A2
3216	C3
3217	A3
3218	C3
3219	C3
3220	B3
3221	B2
3222	A3
3225	B3
3226	B3
3227	B3
3228	C5
3229	A3
3230	B2
3231	B2
3232	B2
3233	B3
3234	B3
3235	B3
3236	B3
3237	B3
3238	B3
3239	A3
3240	B2
3241	B3
3242	B2
3243	B2
3244	B1
3245	A4
3246	C2
3247	D2
3248	D2
3250	A3
3251	A3
3252	A3
3300	E1
3302	E1
3303	D1
3304	E1
3305	E1
3306	E1
3307	E1
3308	E1
3309	C1
3310	C1
3311	B1
3312	C1
3313	B1
3314	C1
3315	B1
3316	B1
3317	B1
3318	C1
3333	C2
3334	D2
3335	D2
3336	E3
3337	E3
3338	E3
3339	E3
3340	E2
3344	E4
3347	E4
3350	C4
3351	D5
3352	E4
3353	D4
3354	D4
3355	E3
3356	D4
3357	E4
3358	D4
3359	D5
3360	C6
3361	E4

Sound decoder panel



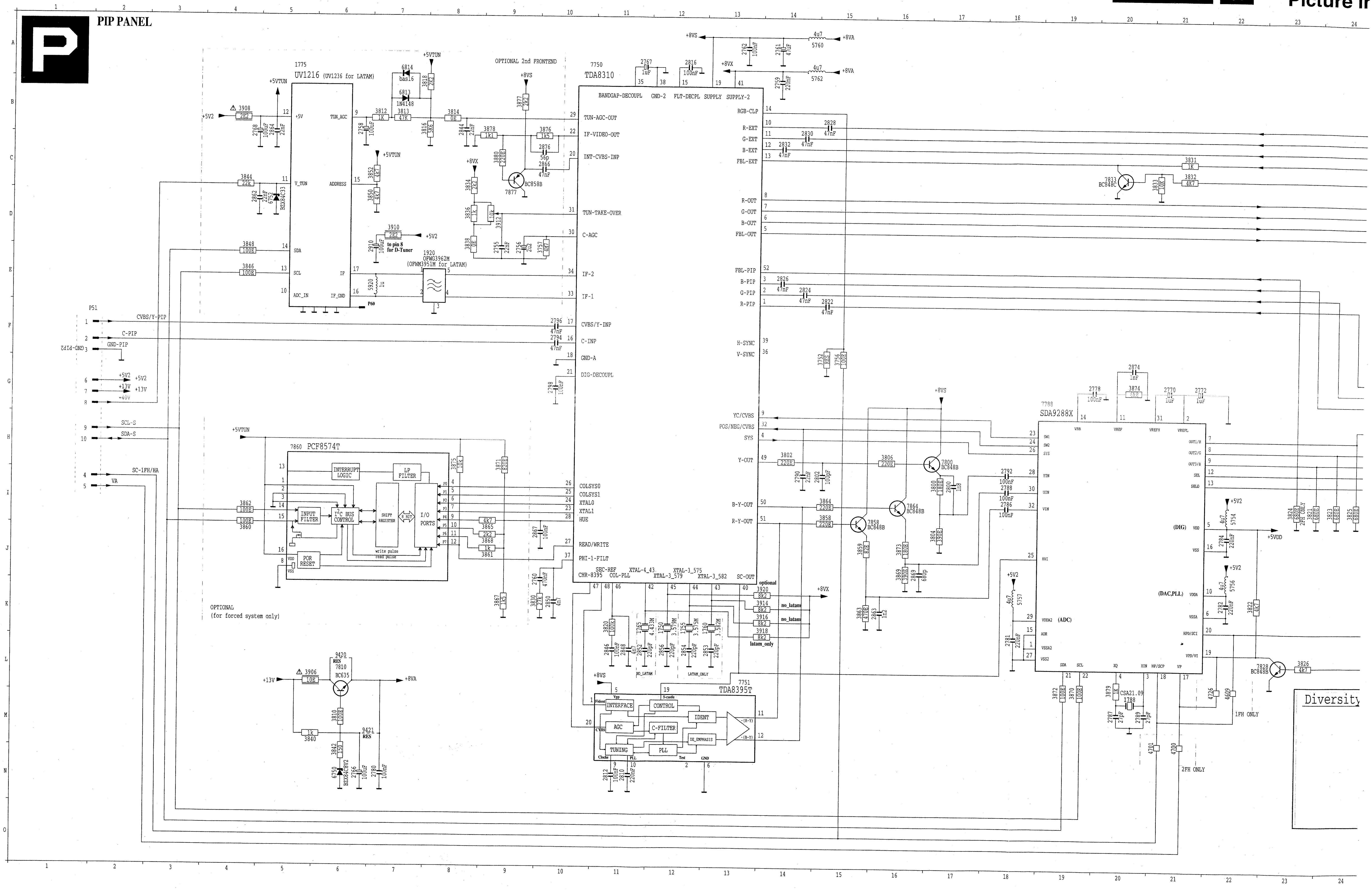


1530	D4
1531	C4
1532	C4
1533	D4
1534	D4
1535	D4
1550	D2
1578	C5
1579	C5
1580	B5
1581	C5
1582	B5
1583	B5
1605	C3
2524	C5
2525	E5
2527	E4
2528	D5
2529	D4
2531	D4
2533	D4
2534	E3
2535	E3
2536	D3
2537	D3
2538	D3
2539	D3
2540	E4
2541	E4
2542	E4
2543	E3
2544	E3
2546	D3
2547	E3
2548	D2
2549	D3
2550	E2
2551	D2
2552	D2
2553	D2
2554	E2
2555	D1
2556	D2
2557	D1
2558	D1
2559	E2
2560	C1
2561	C2
2562	E1
2563	E2
2565	E2
2566	C1
2567	E1
2568	E1
2569	C3
2570	B1
2571	B2
2573	C1
2574	C1
2575	C2
2576	C1
2577	C4
2579	B1
2580	B1
2581	B1
2582	C1
2583	C1
2584	C1
2586	B1
2590	B4
2591	C4
2592	B4
2593	B4
2594	B3
2596	C3
2597	C3
2598	B3
2600	C3
2601	C3
2602	C3
2603	C3
2604	B3
2605	C3
2606	C3
2607	C3
2608	C3
2610	A4
2611	A4
2612	A4
2613	B4
2614	B4
2615	B3
2616	B3
2617	A2
2618	B2
2619	B2
2620	A1
2621	A2
2622	A2
2623	A3
2625	B2
2630	D4
2631	D3
2633	D3
2634	D2
2635	E2
2638	E4
2642	E4
2643	D3
2644	D4
2646	B1
3523	D4
3524	C5
3525	E5
3526	E5
3527	E5
3528	D4
3529	C5
3530	D4
3531	D4
3532	D4
3533	E4
3534	D4
3535	D3
3536	C5
3537	D3
3538	D3
3539	E4
3540	E4
3541	E3
3542	E3
3543	E3
3544	D3
3545	D2
3547	D2
3548	D3
3549	D3
3550	D2
3552	D2
3553	D2
3554	D1
3555	E2
3556	D2
3557	D1
3560	C1
3561	C1
3563	C2
3566	C1
3567	C1
3568	C1
3569	B1
3570	B2
3571	C4
3572	C4
3573	C3
3574	C2
3575	C2
3576	C2
3577	C2
3578	C5
3579	C5
3580	B5
3581	C5
3582	B5
3583	C5
3584	C3
3585	B3
3586	B2
3587	B3
3588	B3
3589	B3
3590	C3
3591	E2
3593	E2
3594	E2
3595	C3
3596	B2
3597	C3
3598	C5
3601	A4
3602	D5
3603	D5
3604	C2
3605	C2
3606	C2
3607	B5
3608	A4
3609	A4
3610	A4
3611	A4
3612	A4
3613	B4
3614	A2
3615	A2
3616	A1
3617	A1
3618	E4
3619	E4
3620	A2
3621	A2
3622	A2
3623	A3
3624	A3
3625	B3
3626	B4
3627	A3
3628	B2
3629	B2
3630	B4
3631	D3
3632	D3
3633	D3
3634	D4
3635	D4
3637	D4
3638	E4
3640	D4
3641	E4
3642	E4
3643	E4
3644	E4
3645	C2
3646	B1
3647	B2
4560	D2
4586	C3
4587	C4
4601	A4
4631	D3
4644	D4
5535	D3
5537	D3
5590	C3
5600	D3
5601	A4
5602	D1
5603	B1
5604	D3
5605	D2
5606	C2
5610	A4
5611	A4
5612	A5
5613	A4
5618	B2
5619	A3
6535	E4
6540	E4
6545	D2
6555	E2
6594	E2
6595	B2
6612	B4
6622	A2
6623	A3
6624	A3
7525	E4
7526	D5
7530	E4
7535	E3
7545	D3
7550	D2
7561	B1
7576	C2
7590	C4
7600	C3
7608	A4
7610	B4
7615	A2
7620	A2
7624	B3
7625	A2
7630	B2
7631	D3
7632	D4
7638	E4
7642	E4
7647	B2
G46	A5
G47	E5
G80	C2

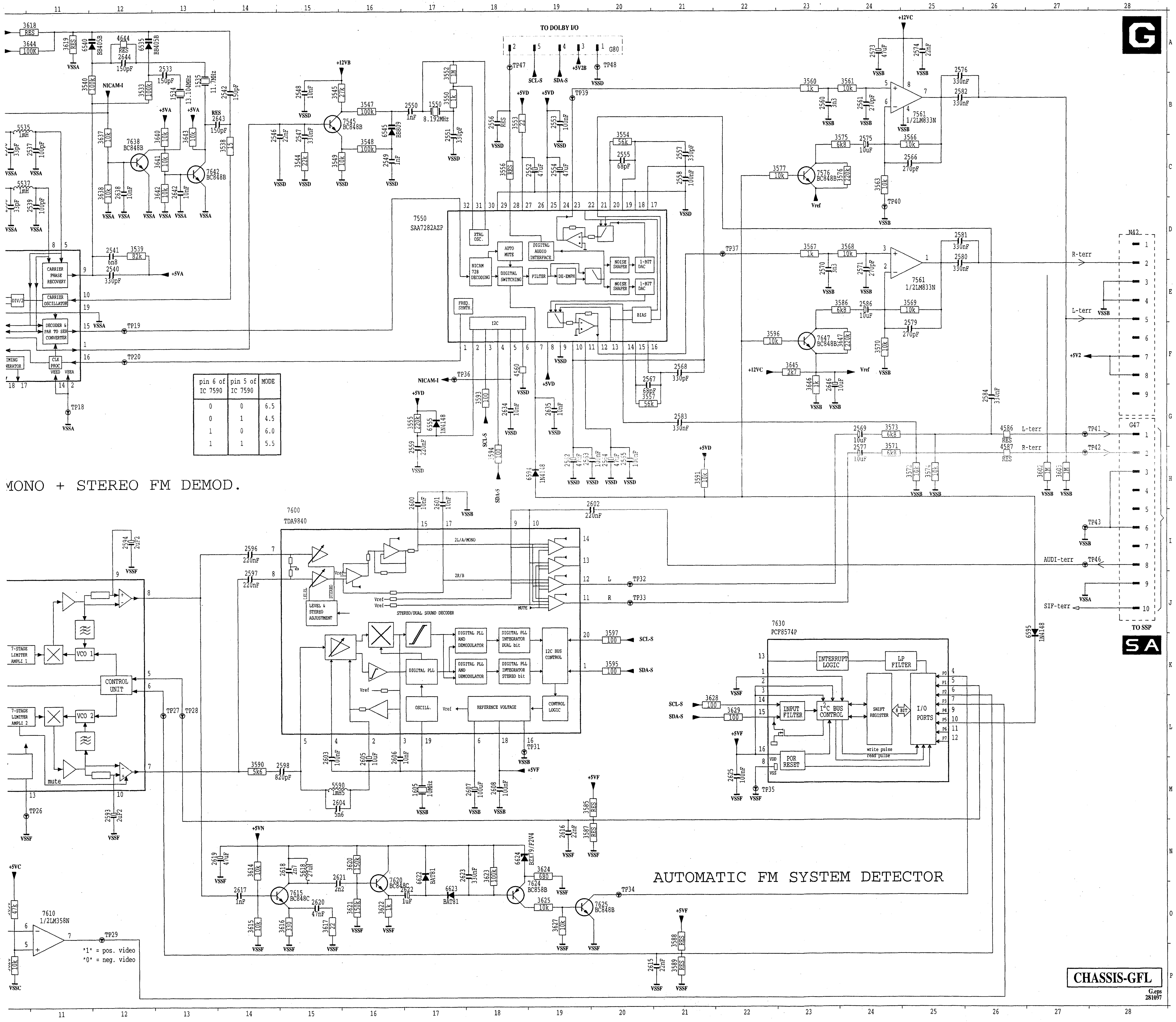

G
GLOBAL SOUND DECODER
NICAM PROCESSING
MULTI MONO + STEREO FM DEMOD.
POS/NEG DETECTOR
AUTOMATIC FM SYSTEM DETECTO
TO DOLBY I/O
TO SSP
SA
7535 TDA8732
7550 SAA7282AZP
7590 TDA9820
7600 TDA9840
7630 PCF8574P
7610 1/2LM358N
7561 1/2LM833N
SIF-terr
CVBS-terr
VTI-terr
SCL-S
SDA-S
NICAM-I
"1" = pos. video
"0" = neg. video

pin 6 of IC 7590	pin 5 of IC 7590	MODE
0	0	6.5
0	1	4.5
1	0	6.0
1	1	5.5

Picture in picture panel


P
PIP PANEL
1775
UV1216 (UV1236 for LATAM)
+5VTUN
+5V2
3908 2E2
2768 100uF
2864 22nF
+5V
TUN_AGC
V_TUN
ADDRESS
3844 22k
2862 22nF
6752 BZX84C33
3848 100E
3846 100E
SDA
SCL
IF
ADC_IN
IF_GND
P60
6814 bas16
6813 1N4148
3812 1K
3813 47K
3818 2K2
3816 3K9
2758 100nF
3852 4K7
3850 4K7
3910 2E2
2910 100uF
to pin 8 for D-Tuner
1920 OFWG3962M (OFWM3951M for LATAM)
5920 1u
OPTIONAL 2nd FRONTEND
+8VS
3877 2k2
3814 0E
2844 22nF
3878 1k1
3876 1k5
2876 56p
2866 47nF
3880 220E
+8VX
BC858B
7877
3834 2K2
3836 1k
3912 10k
3838 0E
2755 22nF
2756 22nF
2757 4K7
7750
TDA8310
2767 1uF
2816 100nF
BANDGAP-DECOUPL
GND-2
FLT-DECPL
SUPPLY
SUPPLY-2
TUN-AGC-OUT
IF-VIDEO-OUT
INT-CVBS-INP
TUN-TAKE-OVER
C-AGC
IF-2
IF-1
CVBS/Y-INP
C-INP
GND-A
DIG-DECOUPL
COLSYS0
COLSYS1
XTAL0
XTAL1
HUE
READ/WRITE
PHI-1-FILT
SEC-REF
CHR-8395
COL-PLL
XTAL-4_43
XTAL-3_579
XTAL-3_575
XTAL-3_582
SC-OUT
RGB-CLP
R-EXT
G-EXT
B-EXT
FBL-EXT
R-OUT
G-OUT
B-OUT
FBL-OUT
FBL-PIP
B-PIP
G-PIP
R-PIP
H-SYNC
V-SYNC
YC/CVBS
POS/NEG/CVBS
SYS
Y-OUT
B-Y-OUT
R-Y-OUT
+8VS
+8VA
+8VX
4u7 5760
4u7 5762
2762 100nF
2761 47uF
2759 220nF
2828 47nF
2830 47nF
2832 47nF
2826 47nF
2824 47nF
2822 47nF
3752 82E
3756 100E
2796 47nF
2794 47nF
2798 100nF
P51
CVBS/Y-PIP
C-PIP
GND-PIP
GND-PIP2
+5V2
+13V
+40V
SCL-S
SDA-S
SC-1FH/HA
VA
+5VTUN
7860 PCF8574T
INTERRUPT LOGIC
LP FILTER
INPUT FILTER
I2C BUS CONTROL
SHIFT REGISTER
I/O PORTS
POR RESET
write pulse
read pulse
VDD
VSS
3862 100E
3860 100E
3875 10k
3871 820E
4k7 3865
2k2 3868
1k 3861
2867 100nF
3867 1k5
OPTIONAL (for forced system only)
2760 470nF
3830 27K
2850 4n7
3820 100K
2846 100nF
2848 4n7
2852 220pF
1745 4.433M
1750 3.579M
1755 3.575M
1760 3.582M
2856 220pF
2854 220pF
2853 220pF
NO_LATAM
LATAM_ONLY
optional
3920 8K2
3914 8K2
3916 8K2
3918 8K2
no_latam
latam_only
7751
TDA8395T
INTERFACE
CONTROL
IDENT
AGC
C-FILTER
DE_EMPHASIS
TUNING
PLL
-(R-Y)
-(B-Y)
2812 100nF
2810 220nF
9420 RES
7810 BC635
3906 10E
+13V
3810 100E
3840 1k
9421 RES
3842 150E
6750 BZX84C8V2
2766 100uF
2780 100nF
3802 220E
2790 22nF
2802 100pF
3806 220E
7800 BC848B
3800 180E
2800 1n8
3864 220E
3858 220E
7864 BC848B
7858 BC848B
3859 82E
3873 180E
3869 390E
2869 680p
3804 390E
3863 470E
2863 1n2
7831 BC848C
3831 1K
3832 4K7
3833 10K
2874 1nF
3874 1K2
2778 100nF
2770 1uF
2772 1uF
7788
SDA9288X
VRB
VREF
VREFH
VREFL
SW1
SW2
SYS
YIN
UIN
VIN
HVI
VDDA2 (ADC)
ADR
VSSA2
VSS2
SDA
SCL
XQ
XIN
HF/SCP
VP
OUT1/R
OUT2/G
OUT3/B
SEL
SELD
(DIG) VDD
VSS
(DAC,PLL) VDDA
VSSA
HPD/SCI
VPD/VI
2792 100nF
2788 100nF
2786 100nF
+5V2
4u7 5757
2781 220nF
+5V2
4u7 5754
2784 220nF
4u7 5756
2782 220nF
+5VDD
3822 4K7
3872 100E
3870 100E
3879 1K
CSA21.09
1788
2787 27pF
2789 27pF
4701
4700
4726
4609
2FH ONLY
1FH ONLY
3824 680E 2FH ONLY
3821 680E
3823 680E
3825 680E
7828 BC848B
3826 4K7
Diversity
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
A B C D E F G H I J K L M N O

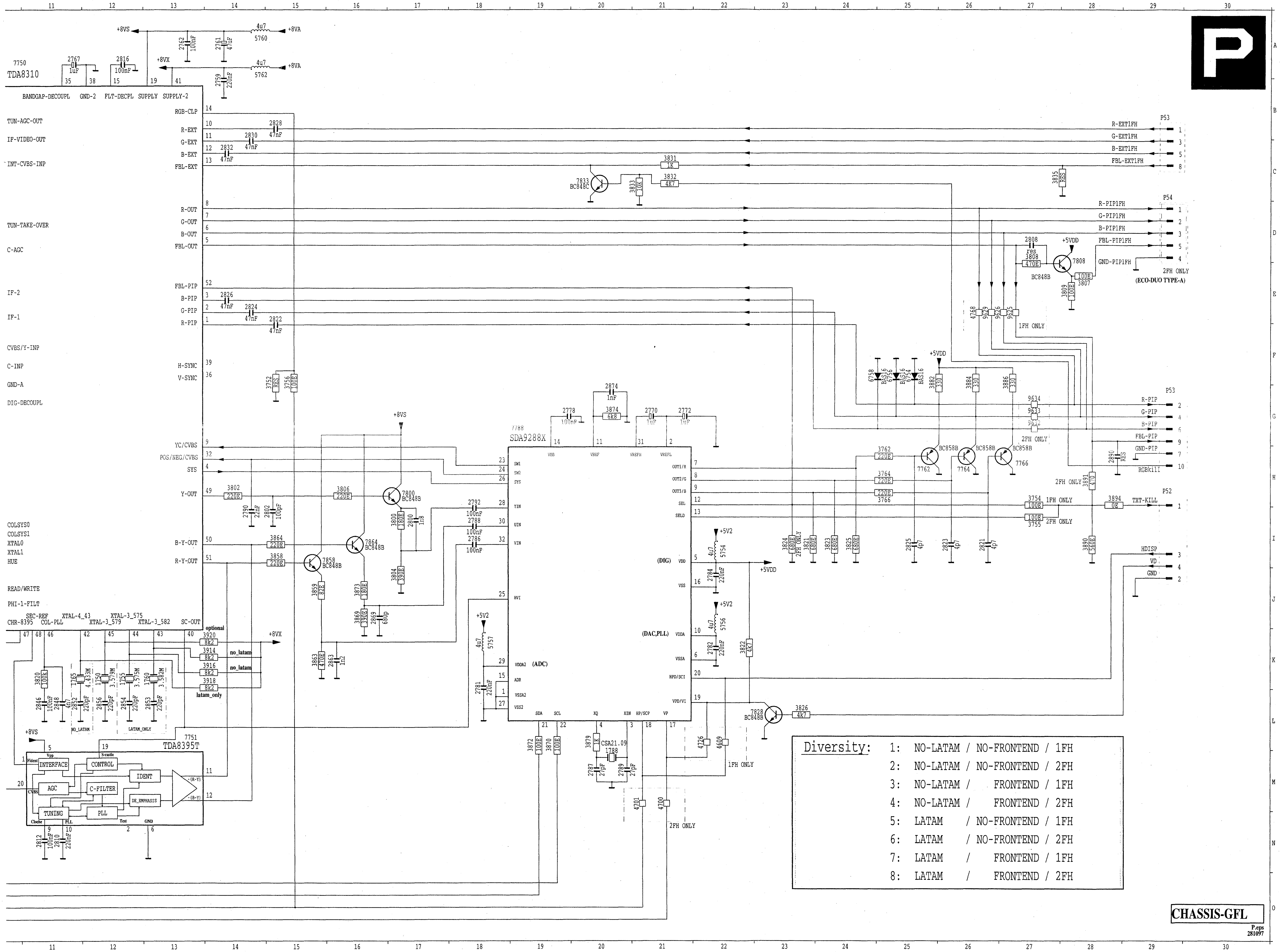
Sound decoder panel


MONO + STEREO FM DEMOD.
AUTOMATIC FM SYSTEM DETECTOR
TO DOLBY I/O
7550
SAA7282AZP
7600
TDA9840
7630
PCF8574P
7561
1/2LM833N
7610
1/2LM358N
CARRIER PHASE RECOVERY
CARRIER OSCILLATOR
DECODER & PAR TO SER CONVERTER
XTAL OSC.
NICAM 728 DECODING
AUTO MUTE
DIGITAL AUDIO INTERFACE
DIGITAL SWITCHING
FILTER
DE-EMPH
NOISE SHAPER
1-BIT DAC
FREQ. SYNTH.
I2C
BIAS
STEREO/DUAL SOUND DECODER
LEVEL & STEREO ADJUSTMENT
DIGITAL PLL AND DEMODULATOR
DIGITAL PLL INTEGRATOR DUAL bit
DIGITAL PLL INTEGRATOR STEREO bit
DIGITAL PLL
I2C BUS CONTROL
OSCILL.
REFERENCE VOLTAGE
CONTROL LOGIC
INTERRUPT LOGIC
LP FILTER
INPUT FILTER
I2C BUS CONTROL
SHIFT REGISTER
I/O PORTS
POR RESET
write pulse
read pulse
7-STAGE LIMITER AMPL1 1
7-STAGE LIMITER AMPL1 2
VCO 1
VCO 2
CONTROL UNIT
mute
"1" = pos. video
"0" = neg. video
R-terr
L-terr
AUDI-terr
SIF-terr
TO SSP
N42
G47
G80
NICAM-I
SCL-S
SDA-S
CHASSIS-GFL
G
SA
G.eps
281097

pin 6 of IC 7590	pin 5 of IC 7590	MODE
0	0	6.5
0	1	4.5
1	0	6.0
1	1	5.5

1530	A 5
1531	B 5
1532	D 5
1533	E 5
1534	B13
1535	B13
1550	B17
1578	H 7
1579	I 7
1580	J 7
1581	K 7
1582	L 7
1583	M 7
1605	M17
2524	G 3
2525	D 1
2527	C 3
2528	B 2
2529	D 3
2531	D 4
2533	A13
2534	D 9
2535	D 9
2536	C10
2537	C11
2538	D10
2539	D11
2540	E12
2541	D12
2542	B14
2543	G 8
2544	G 8
2546	B14
2547	B15
2548	B15
2549	C16
2550	B17
2551	B17
2552	C19
2553	B19
2554	C19
2555	C20
2556	B18
2557	C21
2558	C21
2559	G17
2560	B23
2561	B24
2562	H19
2563	H19
2564	H20
2565	H20
2566	C25
2567	F20
2568	F21
2569	G24
2570	E23
2571	E24
2573	A24
2574	A25
2575	C24
2576	A25
2577	H24
2579	F25
2580	D25
2581	D25
2582	B25
2583	G21
2584	G26
2586	E24
2590	M 8
2591	M 9
2592	M10
2593	M12
2594	I12
2596	I14
2597	J14
2598	M15
2600	H17
2601	H17
2602	H20
2603	L15
2604	M15
2605	L16
2606	L16
2607	M18
2608	M18
2610	P 6
2611	P 7
2612	O 8
2613	O 8
2614	P10
2615	P20
2616	N19
2617	O14
2618	N15
2619	N13
2620	O15
2621	N15
2622	O17
2623	N17
2625	M22
2630	B 6
2631	D 6
2633	E 8
2634	G18
2635	G19
2638	C12
2642	C13
2643	B14
2644	A12
2646	F23
3523	F 2
3524	G 2
3525	C 1
3526	D 1
3527	C 2
3528	D 2
3529	G 3
3530	D 3
3531	B 4
3532	E 4
3533	B12
3534	E 3
3535	C10
3536	G 3
3537	D10
3538	C14
3539	D12
3540	B11
3541	G 8
3542	G 9
3543	G 9
3544	C15
3545	B15
3547	B16
3548	C16
3549	C15
3550	B17
3552	A17
3553	B18
3554	C20
3555	G17
3556	C18
3557	G20
3560	B23
3561	B24
3563	C24
3566	C25
3567	D23
3568	D24
3569	E25
3570	F24
3571	H24
3572	H25
3573	G24
3574	H25
3575	C24
3576	C24
3577	C23
3578	H 6
3579	I 6
3580	J 6
3581	K 6
3582	L 6
3583	M 6
3584	M 9
3585	M19
3586	E24
3587	N19
3588	O21
3589	P21
3590	M14
3591	H21
3593	G18
3594	H18
3595	K20
3596	F22
3597	K20
3598	H 6
3601	N 3
3602	H27
3603	H27
3604	O 3
3605	P 3
3606	P 3
3607	O 6
3608	O 6
3609	O 7
3610	O 8
3611	P 7
3612	O 9
3613	O 9
3614	N14
3615	O14
3616	O15
3617	O15
3618	A11
3619	A11
3620	N16
3621	O16
3622	O16
3623	N18
3624	N19
3625	O19
3626	P10
3627	O19
3628	L21
3629	L22
3630	O10
3631	C 6
3632	D 6
3633	E 7
3634	D 8
3635	B 8
3637	B12
3638	C12
3640	B13
3641	C13
3642	C13
3643	B13
3644	A11
3645	F23
3646	F23
3647	F24
4560	F18
4586	G26
4587	H26
4601	O 3
4631	E 6
4644	A12
5535	B10
5537	C10
5590	M15
5600	N 4
5601	N 4
5602	O 4
5603	O 4
5604	O 4
5605	P 4
5606	P 4
5610	L 4
5611	L 4
5612	O 3
5613	O 3
5618	N15
5619	M 4
6535	A12
6540	A11
6545	B16
6555	G17
6594	H19
6595	J27
6612	C10
6622	N17
6623	O17
6624	N18
7525	D 2
7526	F 2
7530	C 3
7535	E 8
7545	B16
7550	D17
7561	E25
7561	B25
7576	C23
7590	I 9
7600	I15
7608	O 6
7610	O 8
7610	O11
7615	O15
7620	N16
7624	O18
7625	O20
7630	J22
7631	D 7
7632	D 7
7638	C12
7642	C13
7647	F23
G46	K 2
G47	G28
G80	A20
N42	D28
N43	H 2
TP1	L 3
TP10	P 4
TP11	P 2
TP12	M 3
TP13	D 1
TP14	E 1
TP15	G 4
TP16	D 4
TP17	E 8
TP18	G11
TP19	F12
TP2	L 3
TP20	F12
TP21	H 8
TP22	I 8
TP23	J 8
TP24	K 8
TP25	L 8
TP26	M10
TP27	L13
TP28	L13
TP29	O12
TP3	M 4
TP30	P 8
TP31	L18
TP32	J20
TP33	J20
TP34	O20
TP35	M22
TP36	F17
TP37	D22
TP39	B19
TP4	N 4
TP40	D24
TP41	G27
TP42	H27
TP43	I27
TP44	M 4
TP46	I27
TP47	A18
TP48	A20
TP5	N 4
TP6	O 4
TP7	O 4
TP8	O 4
TP9	P 4

Picture in picture panel

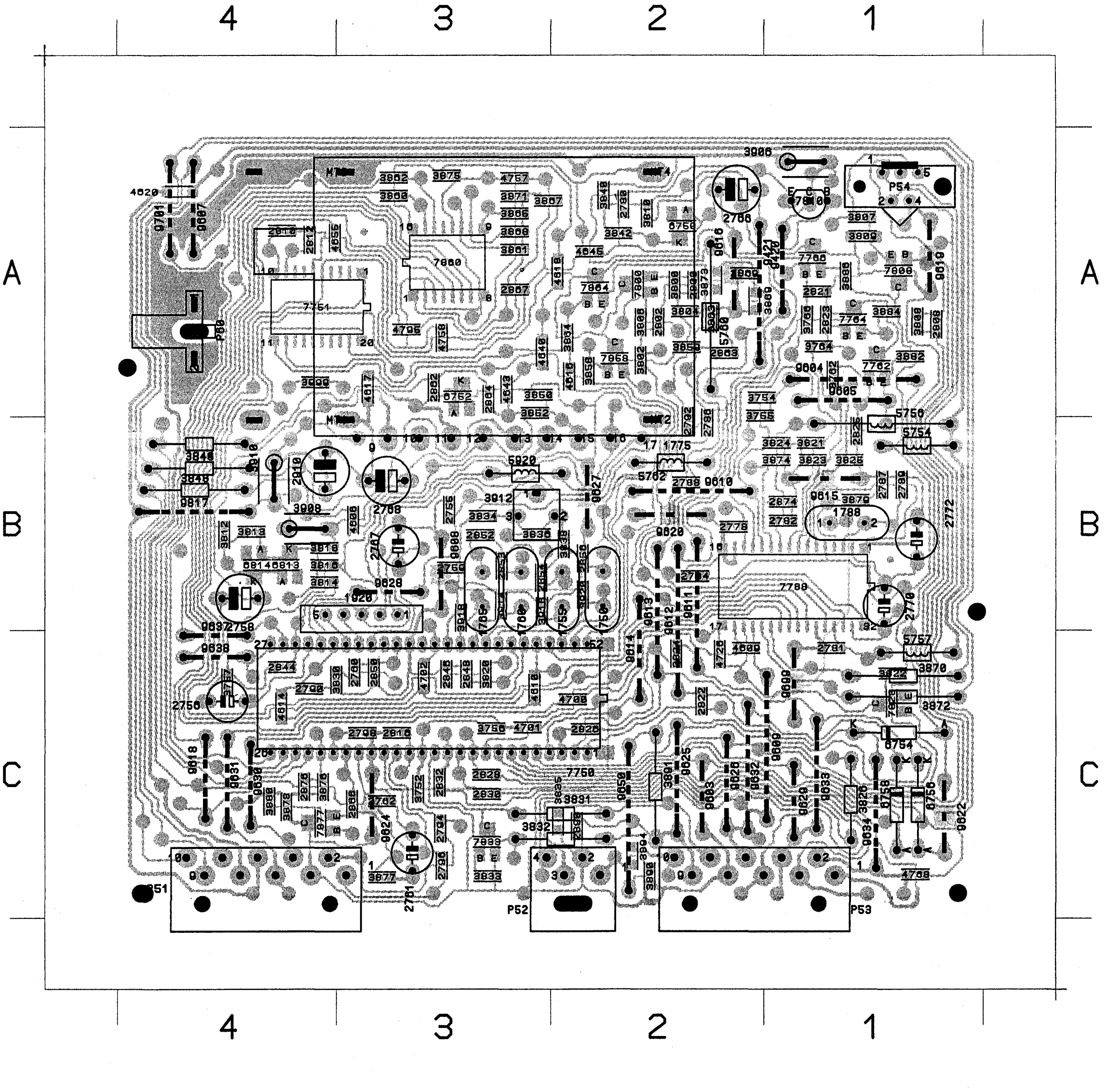

P
7750
TDA8310
BANDGAP-DECOUPL GND-2 FLT-DECPL SUPPLY SUPPLY-2
TUN-AGC-OUT
IF-VIDEO-OUT
INT-CVBS-INP
TUN-TAKE-OVER
C-AGC
IF-2
IF-1
CVBS/Y-INP
C-INP
GND-A
DIG-DECOUPL
COLSYS0
COLSYS1
XTAL0
XTAL1
HUE
READ/WRITE
PHI-1-FILT
SEC-REF XTAL-4_43 XTAL-3_575
CHR-8395 COL-PLL XTAL-3_579 XTAL-3_582 SC-OUT
RGB-CLP
R-EXT
G-EXT
B-EXT
FBL-EXT
R-OUT
G-OUT
B-OUT
FBL-OUT
FBL-PIP
B-PIP
G-PIP
R-PIP
H-SYNC
V-SYNC
YC/CVBS
POS/NEG/CVBS
SYS
Y-OUT
B-Y-OUT
R-Y-OUT
+8VS
+8VA
+8VX
4u7 5760
4u7 5762
2762 100nF
2761 47uF
2759 220nF
2767 1uF
2816 100nF
2828 47nF
2830 47nF
2832 47nF
2826 47nF
2824 47nF
2822 47nF
3752 RES
3756 100E
7833 BC848C
3831 1K
3832 4K7
3833 10K
3835 RES
R-EXT1FH
G-EXT1FH
B-EXT1FH
FBL-EXT1FH
P53
P54
R-PIP1FH
G-PIP1FH
B-PIP1FH
FBL-PIP1FH
GND-PIP1FH
2FH ONLY
(ECO-DUO TYPE-A)
2808
+5VDD
res 3808 470E
7808 BC848B
100E 3807
3809 100E
4768
9629
9626
9625
1FH ONLY
6758
BAS16 6756
BAS16 6754
BAS16
3882 330
3884 330
3886 330
9634
9633
9632
2FH ONLY
P53
R-PIP
G-PIP
B-PIP
FBL-PIP
GND-PIP
2890 RES
RGBkill
3891 470E
2874 1nF
2778 100nF
3874 6k8
2770 1uF
2772 1uF
7788
SDA9288X
VSS VREF VREFH VREFL
SW1 SW2 SYS
YIN UIN VIN
HVI
OUT1/R OUT2/G OUT3/B SEL SELD
(DIG) VDD VSS
(DAC,PLL) VDDA VSSA
HPD/SC1 VPD/VI
VDDA2 (ADC) ADR VSSA2 VSS2
SDA SCL XQ XIN HP/SCP VP
3762 220E
3764 220E
220E 3766
7762 BC858B
7764 BC858B
7766 BC858B
3754 100E 1FH ONLY
100E 3755 2FH ONLY
2FH ONLY
3894 0E
TXT-KILL
P52
HDISP
VD
GND
3890 680E
3824 680E
2FH ONLY
3821 680E
3823 680E
3825 680E
2825 4p7
2823 4p7
2821 4p7
+5V2
4u7 5754
2784 220nF
+5VDD
4u7 5756
2782 220nF
3822 4K7
7828 BC848B
3826 4K7
4726
4609
1FH ONLY
4701
4700
2FH ONLY
3872 100E
3870 100E
3879 1K
CSA21.09 1788
2787 27pF
2789 27pF
4u7 5757
2781 220nF
3802 220E
2790 27nF
2802 100pF
3806 220E
7800 BC848B
3800 180E
2800 1n8
2792 100nF
2788 100nF
2786 100nF
3804 390E
3864 220E
3858 220E
7864 BC848B
7858 BC848B
3859 82E
3873 180E
3869 390E
2869 680p
3863 470E
2863 1n2
optional
3920 8k2
3914 8k2
3916 8k2
3918 8k2
no_latam
no_latam
latam_only
3820 100E
2846 100nF
2848 4u7
1765 4.433M
2852 220pF
1750 3.579M
2856 220pF
1755 3.575M
2854 220pF
1760 3.582M
2853 220pF
NO_LATAM
LATAM_ONLY
7751
TDA8395T
Vpp
INTERFACE
CONTROL
IDENT
AGC
C-FILTER
DE_EMPHASIS
TUNING
PLL
Fident
CVBS
S-cache
Clocke
Test
GND
-(R-Y)
-(B-Y)
2812 100nF
2810 220nF
CHASSIS-GFL
P.eps
281097

Diversity:	
1:	NO-LATAM / NO-FRONTEND / 1FH
2:	NO-LATAM / NO-FRONTEND / 2FH
3:	NO-LATAM / FRONTEND / 1FH
4:	NO-LATAM / FRONTEND / 2FH
5:	LATAM / NO-FRONTEND / 1FH
6:	LATAM / NO-FRONTEND / 2FH
7:	LATAM / FRONTEND / 1FH
8:	LATAM / FRONTEND / 2FH

1750	K12
1755	K12
1760	K13
1765	K11
1775	A 5
1788	M20
1920	E 7
2755	E 9
2756	E 9
2758	B 6
2759	B14
2760	J10
2761	A14
2762	A13
2766	N 6
2767	A11
2768	B 4
2770	G21
2772	G21
2778	G19
2780	N 7
2781	K18
2782	K22
2784	J22
2786	I18
2787	M20
2788	I18
2789	M20
2790	I14
2792	H18
2794	F10
2796	F10
2798	G10
2800	I17
2802	I15
2808	D27
2810	N11
2812	N11
2816	A12
2821	I26
2822	E15
2823	I26
2824	E14
2825	I25
2826	E14
2828	B15
2830	B14
2832	C14
2844	B 8
2846	L11
2848	L11
2850	K10
2852	L11
2853	L13
2854	L12
2856	L12
2862	D 4
2863	K16
2864	B 5
2866	C10
2867	J10
2869	J16
2874	G20
2876	C10
2890	H28
2910	E 7
3752	F15
3754	H27
3755	I27
3756	F15
3757	E10
3762	H25
3764	H25
3766	H25
3800	I17
3802	H14
3804	J17
3806	H16
3807	E28
3808	D27
3809	E28
3810	M 6
3812	B 7
3813	B 7
3814	B 8
3816	B 7
3818	B 7
3820	K11
3821	I23
3822	K22
3823	I24
3824	I23
3825	I24
3826	L23
3830	K 9
3831	C21
3832	C21
3833	C21
3834	C 8
3835	C27
3836	D 8
3838	D 8
3840	M 5
3842	N 6
3844	C 4
3846	E 4
3848	E 4
3850	D 6
3852	C 6
3858	I15
3859	J15
3860	J 4
3861	J 9
3862	I 4
3863	K15
3864	I15
3865	J 9
3867	K 9
3868	J 9
3869	J16
3870	L19
3871	H 9
3872	L19
3873	J16
3874	G20
3875	H 8
3876	B10
3877	B 9
3878	B 9
3879	L20
3880	C 9
3882	F25
3884	F26
3886	F27
3890	I28
3891	H28
3894	H28
3906	L 5
3908	B 4
3910	D 7
3912	D 9
3914	K14
3916	K14
3918	K14
3920	K14
3999	J 1
4609	L22
4700	M21
4701	M21
4726	L22
4768	E26
5754	I22
5756	J22
5757	K18
5760	A14
5762	A14
5920	E 7
6750	N 6
6752	D 5
6754	F25
6756	F25
6758	F24
6813	B 7
6814	A 7
7750	A10
7751	L13
7762	H25
7764	H26
7766	H27
7788	G19
7800	H17
7808	E28
7810	L 6
7828	L23
7833	C20
7858	I15
7860	H 5
7864	I16
7877	D 9
9420	L 6
9421	M 7
9625	E27
9626	E27
9629	E26
9632	G27
9633	G27
9634	G27
P51	F 2
P52	H29
P53	B29
P53	G29
P54	C29
P60	F 6

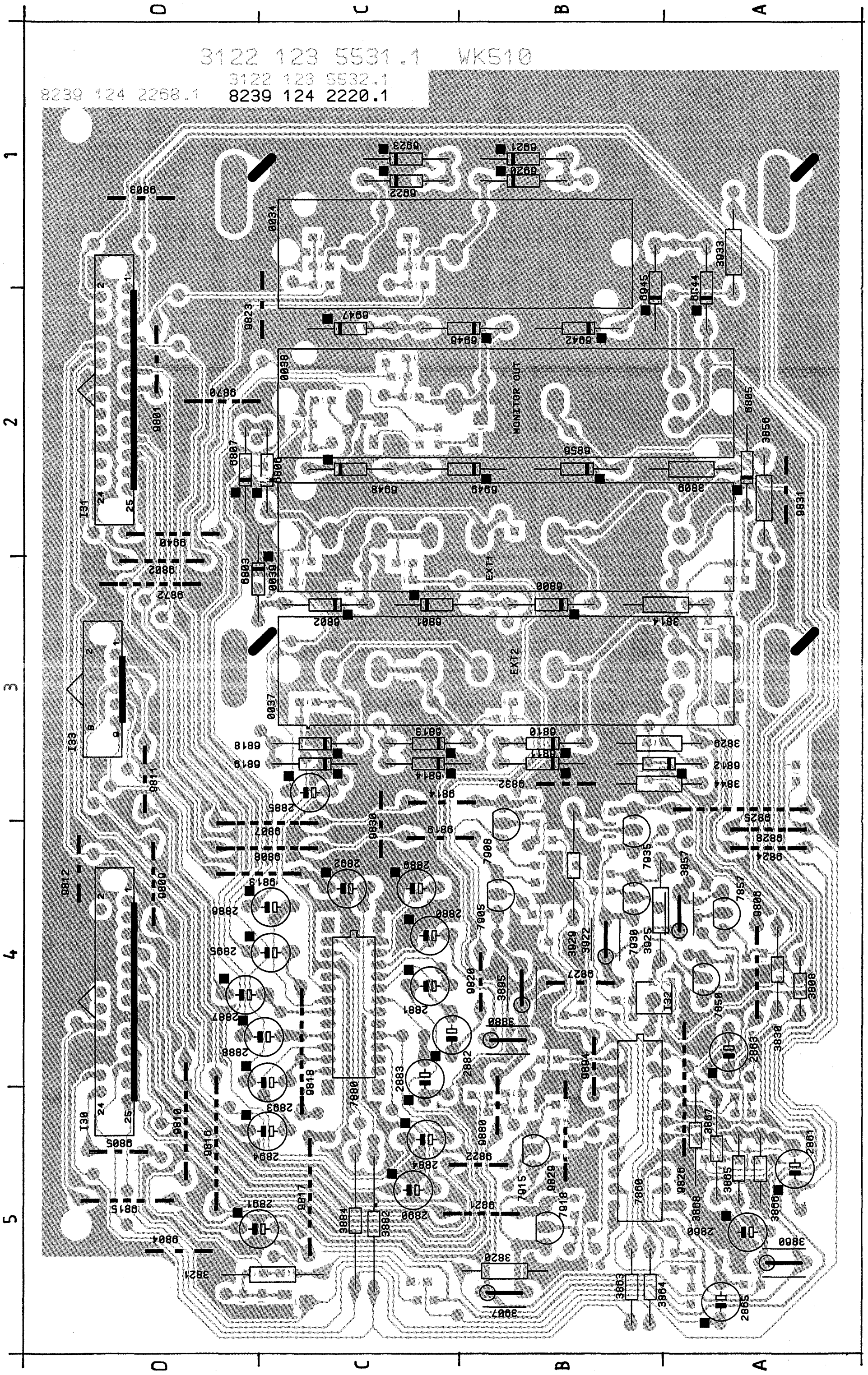
PIP panel

1750	B	2
1755	B	2
1760	B	3
1765	B	3
1775	B	3
1788	B	1
1920	B	3
2755	B	3
2756	C	4
2758	B	4
2759	B	3
2760	C	3
2761	C	3
2762	C	3
2766	A	2
2767	B	3
2768	B	3
2770	B	1
2772	B	1
2778	B	2
2780	A	2
2781	C	1
2782	B	1
2784	B	2
2786	B	2
2787	B	1
2788	B	2
2789	B	1
2790	C	4
2792	B	2
2794	C	3
2796	C	3
2798	C	3
2800	A	2
2802	A	2
2808	A	1
2810	A	4
2812	A	4
2816	C	3
2821	A	1
2822	C	2
2823	A	1
2824	C	2
2825	B	1
2826	C	2
2828	C	3
2830	C	3
2832	C	3
2844	C	4
2846	C	3
2848	C	3
2850	C	3
2852	B	3
2853	B	3
2854	B	3
2856	B	2
2862	A	3
2863	A	2
2864	A	3
2866	C	3
2867	A	3
2869	A	2
2874	B	1
2876	C	4
2890	C	2
2910	B	4
3752	C	3
3754	A	2
3755	A	2
3756	C	3
3757	C	4
3762	A	1
3764	A	1
3766	A	1
3800	A	2
3802	A	2
3804	A	2
3806	A	2
3807	A	1
3808	A	1
3809	A	1
3810	A	2
3812	B	4
3813	B	4
3814	B	4
3816	B	4
3818	B	4
3820	C	3
3821	B	1
3822	C	1
3823	B	1
3824	B	1
3825	B	1
3826	C	1
3830	C	4
3831	C	3
3832	C	3
3833	C	3
3834	B	3
3835	C	2
3836	B	3
3838	B	2
3840	A	2
3842	A	2
3844	B	4
3846	B	4
3848	B	4
3850	A	3
3852	A	3
3858	A	2
3859	A	2
3860	A	3
3861	A	3
3862	A	3
3863	A	2
3864	A	2
3865	A	3
3867	A	3
3868	A	3
3869	A	2
3870	C	1
3871	A	3
3872	C	1
3873	A	2
3874	B	1
3875	A	3
3876	C	4
3877	C	3
3878	C	4
3879	B	1
3880	C	4
3882	A	1
3884	A	1
3886	A	1
3890	C	2
3891	C	2
3894	C	2
3906	A	1
3908	B	4
3910	B	4
3912	B	2
3914	B	3
3916	B	3
3918	B	3
3920	B	2
3999	A	4
4606	B	3
4609	C	2
4610	C	3
4614	C	4
4616	A	2
4617	A	3
4618	A	2
4620	A	4
4640	A	3
4643	A	3
4645	A	2
4655	A	4
4700	C	2
4701	C	3
4702	C	3
4726	C	2
4757	A	3
4758	A	3
4768	C	1
4795	A	3
5754	B	1
5756	B	1
5757	C	1
5760	A	2
5762	B	2
5920	B	2
6750	A	2
6752	A	3
6754	C	1
6756	C	1
6758	C	1
6813	B	4
6814	B	4
7750	C	2
7751	A	4
7762	A	1
7764	A	1
7766	A	1
7788	B	1
7800	A	2
7808	A	1
7810	A	1
7828	C	1
7833	C	3
7858	A	2
7860	A	3
7864	A	2
7877	C	4
9420	A	1
9421	A	2
9603	C	2
9604	A	1
9605	A	1
9607	A	4
9608	B	3
9609	C	1
9610	B	2
9611	B	2
9612	B	2
9613	B	2
9614	B	2
9615	B	1
9616	A	2
9618	C	4
9619	A	1
9620	B	2
9622	C	1
9624	C	3
9625	C	2
9626	C	2
9627	B	2
9628	B	3
9629	C	1
9630	C	4
9631	C	4
9632	C	2
9633	C	1
9634	C	1
9637	C	4
9638	C	4
9650	C	2
9699	C	1
9701	A	4
9817	B	4
P51	C	3
P52	C	2
P53	C	1
P54	A	1
P60	A	4



ECO global I/O panel

I/O panel



0034	C1
0037	B3
0038	B2
0039	B2
2806	C3
2808	C3
2810	A3
2812	A3
2820	C5
2822	C5
2831	B3
2833	C3
2844	B3
2860	A5
2861	A5
2862	A5
2863	A4
2864	B5
2865	A5
2866	A5
2867	B5
2868	A5
2869	A5
2870	A5
2871	A5
2872	B5
2880	C4
2881	C4
2882	C4
2883	C4
2884	C5
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2886	C4
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2888	C4
2889	C4
2890	C5
2891	C5
2892	C4
2893	C4
2894	C5
2895	C4
2905	B4
2915	B5
2920	C1
2922	C1
2934	B4
2938	A4
2940	C2
2941	C2
3806	C3
3807	C3
3808	A4
3809	A2
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3812	A3
3813	A3
3814	A3
3815	A3
3820	B5
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3822	C5
3823	D5
3824	D5
3826	C5
3829	A3
3830	A4
3831	B3
3833	C3
3834	C3
3835	C3
3836	B2
3837	C3
3842	C2
3843	C2
3844	A3
3845	B3
3850	B4
3851	B4
3852	A4
3853	A4
3854	A4
3855	A4
3856	A2
3857	A4
3860	A5
3863	B5
3864	B5
3865	A5
3866	A5
3867	A5
3868	A5
3869	A5
3870	A5
3871	B5
3872	B5
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3914	B4
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3919	C1
3920	C1
3921	B4
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3923	A4
3924	B4
3925	A4
3927	B4
3929	B4
3931	B3
3933	A1
3935	C2
3937	C2
3938	C2
3940	C2
3941	C2
4801	A5
4861	B4
4921	B4
4938	A4
6800	B3
6801	C3
6802	C3
6803	C3
6805	A2
6806	C2
6807	D2
6810	B3
6811	B3
6812	A3
6813	C3
6814	C3
6818	C3
6819	C3
6856	B2
6920	B1
6921	B1
6922	C1
6923	C1
6942	B2
6944	A1
6945	B1
6946	B2
6947	C2
6948	C2
6949	B2
7810	A3
7825	C5
7850	A4
7857	A4
7860	B5
7880	C4
7905	B4
7908	B3
7915	B5
7918	B5
7930	B4
7935	B4
7940	B2
7941	C2
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9802	D3
9803	D1
9804	D5
9805	D5
9806	A4
9807	C3
9808	C4
9809	D4
9810	D5
9811	D3
9812	D4
9813	C4
9814	C3
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9825	A3
9826	A4
9827	B4
9828	A4
9829	B5
9830	C3
9831	A2
9832	B3
9870	D2
9872	D3
9880	B5
9894	B4
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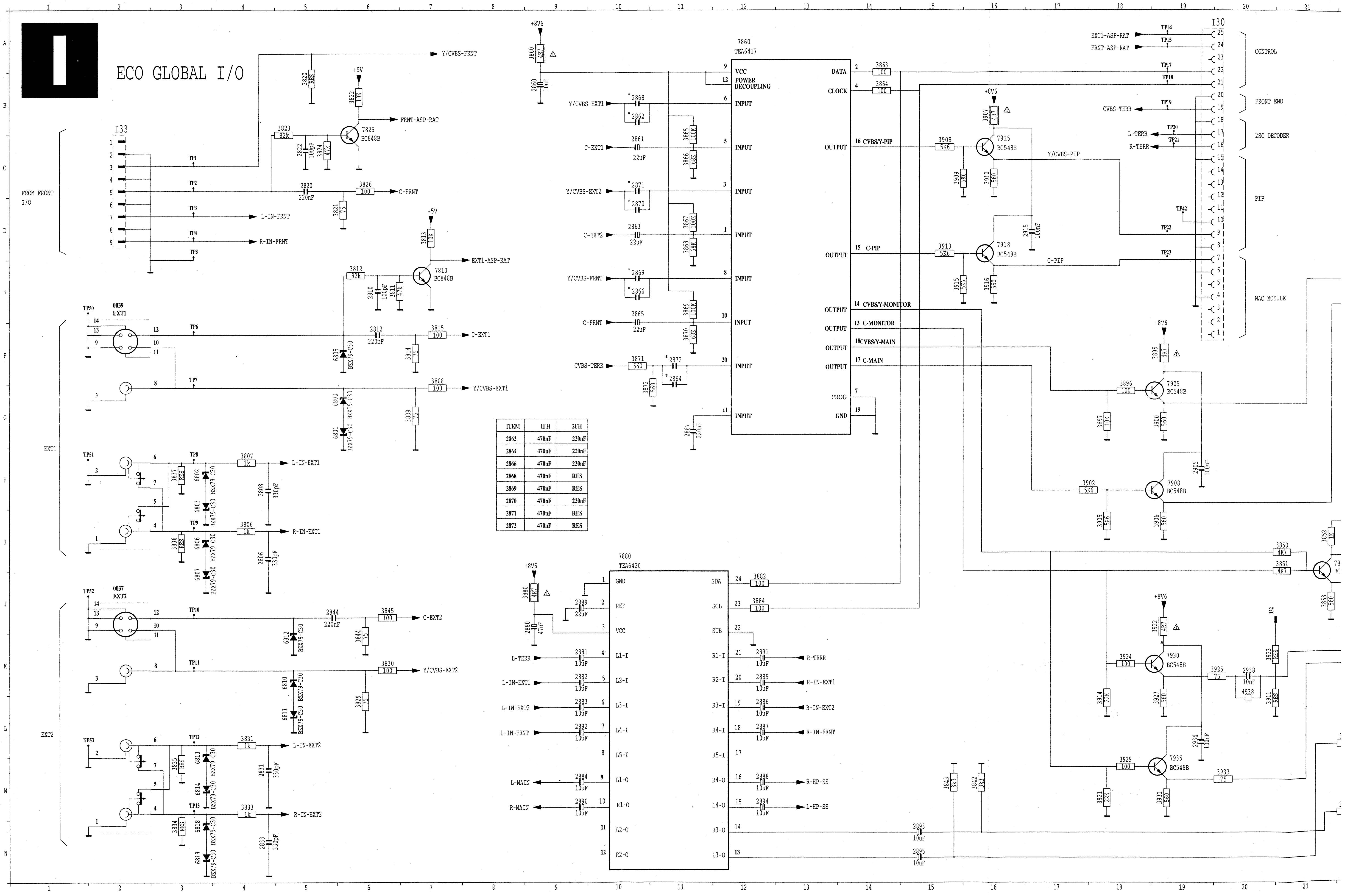
I31	D2
I32	B4
I33	D3

ECO global I/O panel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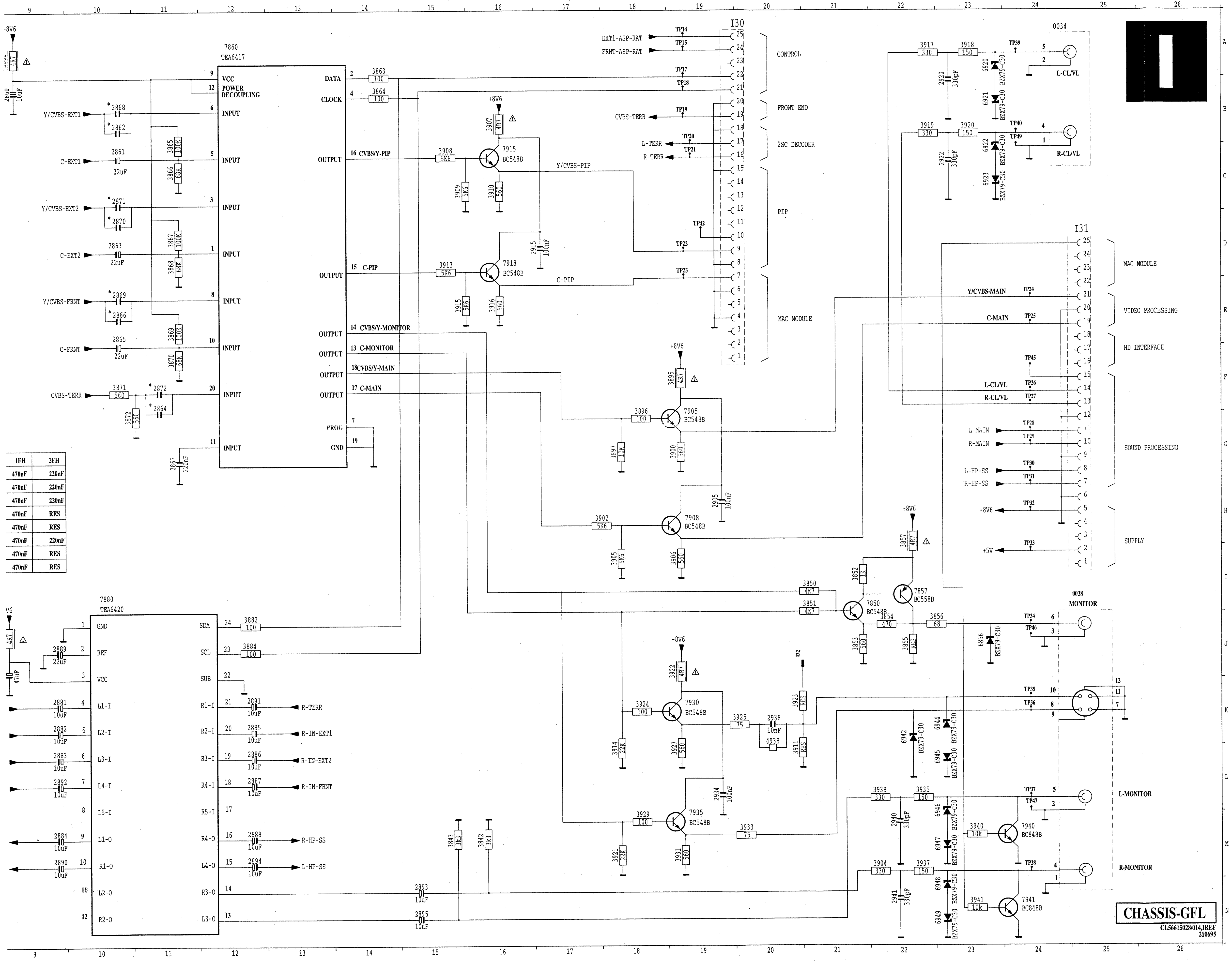
ECO GLOBAL I/O
I33
FROM FRONT I/O
TP1
TP2
TP3
TP4
TP5
Y/CVBS-FRNT
3820 RES
+5V
3822 10K
FRNT-ASP-RAT
3823 82k
2822 100pF
3824 47K
7825 BC848B
2820 220nF
3826 100
C-FRNT
3821 75
L-IN-FRNT
R-IN-FRNT
3813 10K
EXT1-ASP-RAT
3812 82k
2810 100pF
3811 47K
7810 BC848B
TP50
0039 EXT1
TP6
2812 220nF
3815 100
C-EXT1
6805 BZX79-C30
3814 75
TP7
3808 100
Y/CVBS-EXT1
6800 BZX79-C30
6801 BZX79-C30
3809 75
EXT1
TP51
TP8
3837 RES
6802 BZX79-C30
3807 1k
L-IN-EXT1
2808 330pF
6803 BZX79-C30
TP9
3806 1k
R-IN-EXT1
3836 RES
6806 BZX79-C30
2806 330pF
6807 BZX79-C30
TP52
0037 EXT2
TP10
2844 220nF
3845 100
C-EXT2
6812 BZX79-C30
3844 75
TP11
3830 100
Y/CVBS-EXT2
6810 BZX79-C30
6811 BZX79-C30
3829 75
EXT2
TP53
TP12
3831 1k
L-IN-EXT2
3835 RES
6813 BZX79-C30
2831 330pF
6814 BZX79-C30
TP13
3833 1k
R-IN-EXT2
3834 RES
6818 BZX79-C30
2833 330pF
6819 BZX79-C30
+8V6
3860 4R7
2860 10uF
7860 TEA6417
VCC
POWER DECOUPLING
INPUT
OUTPUT
DATA
CLOCK
PROG
GND
Y/CVBS-EXT1
2868
2862
C-EXT1
2861 22uF
3865 100K
3866 68K
Y/CVBS-EXT2
2871
2870
C-EXT2
2863 22uF
3867 100K
3868 68K
Y/CVBS-FRNT
2869
2866
C-FRNT
2865 22uF
3869 100K
3870 68K
CVBS-TERR
3871 560
2872
2864
3872 560
2867 220nF
3863 100
3864 100
16 CVBS/Y-PIP
15 C-PIP
14 CVBS/Y-MONITOR
13 C-MONITOR
18CVBS/Y-MAIN
17 C-MAIN
3907 4R7
3908 5K6
7915 BC548B
3909 5K6
3910 560
Y/CVBS-PIP
2915 100nF
3913 5K6
7918 BC548B
3915 5K6
3916 560
C-PIP
I30
EXT1-ASP-RAT
FRNT-ASP-RAT
CVBS-TERR
L-TERR
R-TERR
TP14
TP15
TP17
TP18
TP19
TP20
TP21
TP42
TP22
TP23
CONTROL
FRONT END
2SC DECODER
PIP
MAC MODULE
3895 4R7
3896 100
7905 BC548B
3897 10K
3900 560
2905 100nF
3902 5K6
7908 BC548B
3905 5K6
3906 560
3850 4K7
3851 4K7
3852 1K
3853 560
7880 TEA6420
GND
REF
VCC
SUB
SDA
SCL
L1-I
L2-I
L3-I
L4-I
L5-I
L1-O
R1-O
L2-O
R2-O
R1-I
R2-I
R3-I
R4-I
R5-I
R4-O
L4-O
R3-O
L3-O
3880 4R7
2880 47uF
2889 22uF
3882 100
3884 100
L-TERR
2881 10uF
L-IN-EXT1
2882 10uF
L-IN-EXT2
2883 10uF
L-IN-FRNT
2892 10uF
L-MAIN
2884 10uF
R-MAIN
2890 10uF
2891 10uF
R-TERR
2885 10uF
R-IN-EXT1
2886 10uF
R-IN-EXT2
2887 10uF
R-IN-FRNT
2888 10uF
R-HP-SS
2894 10uF
L-HP-SS
2893 10uF
2895 10uF
3843 3K3
3842 3K3
3922 4R7
3924 100
7930 BC548B
3914 22K
3927 560
3925 75
2938 10nF
4938
3923 RES
3911 RES
I32
2934 100nF
3929 100
7935 BC548B
3921 22K
3931 560
3933 75

ITEM	1FH	2FH
2862	470nF	220nF
2864	470nF	220nF
2866	470nF	220nF
2868	470nF	RES
2869	470nF	RES
2870	470nF	220nF
2871	470nF	RES
2872	470nF	RES

ECO global I/O panel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TEA6417
VCC
POWER DECOUPLING
INPUT
OUTPUT
DATA
CLOCK
PROG
GND
Y/CVBS-EXT1
C-EXT1
Y/CVBS-EXT2
C-EXT2
Y/CVBS-FRNT
C-FRNT
CVBS-TERR
16 CVBS/Y-PIP
15 C-PIP
14 CVBS/Y-MONITOR
13 C-MONITOR
18 CVBS/Y-MAIN
17 C-MAIN
Y/CVBS-PIP
C-PIP
7915 BC548B
7918 BC548B
7905 BC548B
7908 BC548B
7930 BC548B
7935 BC548B
7850 BC548B
7857 BC558B
7940 BC848B
7941 BC848B
+8V6
I30
EXT1-ASP-RAT
FRNT-ASP-RAT
CVBS-TERR
L-TERR
R-TERR
CONTROL
FRONT END
2SC DECODER
PIP
MAC MODULE
0034
L-CL/VL
R-CL/VL
BZX79-C30
I31
Y/CVBS-MAIN
C-MAIN
L-MAIN
R-MAIN
L-HP-SS
R-HP-SS
+8V6
+5V
MAC MODULE
VIDEO PROCESSING
HD INTERFACE
SOUND PROCESSING
SUPPLY
0038
MONITOR
L-MONITOR
R-MONITOR
7880
TEA6420
GND
REF
VCC
L1-I
L2-I
L3-I
L4-I
L5-I
L1-O
R1-O
L2-O
R2-O
SDA
SCL
SUB
R1-I
R2-I
R3-I
R4-I
R5-I
R4-O
L4-O
R3-O
L3-O
R-TERR
R-IN-EXT1
R-IN-EXT2
R-IN-FRNT
R-HP-SS
L-HP-SS
I32
CHASSIS-GFL
CL56615028/014.IREF
210695

1FH	2FH
470nF	220nF
470nF	220nF
470nF	220nF
470nF	RES
470nF	RES
470nF	220nF
470nF	RES
470nF	RES

0034	A24	6856	J23
0037	J 2	6920	A23
0038	I25	6921	B23
0039	E 2	6922	C23
2806	I 4	6923	C23
2808	H 4	6942	K22
2810	E 6	6944	K23
2812	F 6	6945	L22
2820	C 5	6946	L23
2822	C 5	6947	M22
2831	M 4	6948	N23
2833	N 4	6949	N22
2844	J 5	7810	E 7
2860	B 9	7825	B 6
2861	C10	7850	I21
2862	B10	7857	I22
2863	D10	7860	A12
2864	F11	7880	I10
2865	E10	7905	G19
2866	E10	7908	H19
2867	G11	7915	C16
2868	B10	7918	D16
2869	E10	7930	K19
2870	D10	7935	M19
2871	C10	7940	M24
2872	F11	7941	N24
2880	J 9	I30	A19
2881	K 9	I30	E20
2882	K 9	I30	D20
2883	L 9	I30	D20
2884	M 9	I30	D20
2885	K12	I30	D20
2886	L12	I30	D20
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2888	M12	I30	C20
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2915	D17	I30	A20
2920	B23	I30	A20
2922	C23	I30	F20
2934	L19	I30	E20
2938	K20	I30	E20
2940	M22	I30	E20
2941	N22	I30	E20
3806	I 4	I30	A20
3807	H 4	I31	D25
3808	F 7	I31	I25
3809	G 7	I31	I25
3811	E 6	I31	H25
3812	E 6	I31	H25
3813	D 7	I31	H25
3814	F 7	I31	H25
3815	F 7	I31	H25
3820	B 5	I31	G25
3821	D 6	I31	G25
3822	B 6	I31	G25
3823	B 5	I31	G25
3824	C 5	I31	G25
3826	C 6	I31	F25
3829	L 6	I31	F25
3830	K 6	I31	F25
3831	L 4	I31	F25
3833	M 4	I31	F25
3834	N 3	I31	E25
3835	M 3	I31	E25
3836	I 3	I31	E25
3837	H 3	I31	E25
3842	M16	I31	E25
3843	M15	I31	D25
3844	K 6	I31	D25
3845	J 6	I32	J20
3850	I21	I33	D 2
3851	I21	I33	D 2
3852	I21	I33	D 2
3853	J21	I33	D 2
3854	J22	I33	C 2
3855	J22	I33	C 2
3856	J23	I33	C 2
3857	H22	I33	C 2
3860	A 9	I33	B 2
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3864	B14	TP2	C 3
3865	B11	TP3	D 3
3866	C11	TP4	D 3
3867	D11	TP5	D 3
3868	D11	TP6	F 3
3869	E11	TP7	F 3
3870	F11	TP8	H 3
3871	F10	TP9	I 3
3872	G10	TP10	J 3
3880	J 9	TP11	K 3
3882	J12	TP12	L 3
3884	J12	TP13	M 3
3895	F19	TP14	A19
3896	G18	TP15	A19
3897	G18	TP17	A19
3900	G19	TP18	B19
3902	H18	TP19	B19
3904	M22	TP20	B19
3905	I18	TP21	C19
3906	I19	TP22	D19
3907	B16	TP23	D19
3908	C15	TP24	E24
3909	C15	TP25	E24
3910	C16	TP26	F24
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3913	D15	TP28	G24
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3915	E15	TP30	G24
3916	E16	TP31	H24
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3920	B23	TP35	K24
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3938	L22	TP51	H 2
3940	M23	TP52	J 2
3941	N23	TP53	L 2
4938	K20		
6800	G 6		
6801	G 5		
6802	H 3		
6803	H 3		
6805	F 6		
6806	I 3		
6807	J 3		
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6813	L 3		
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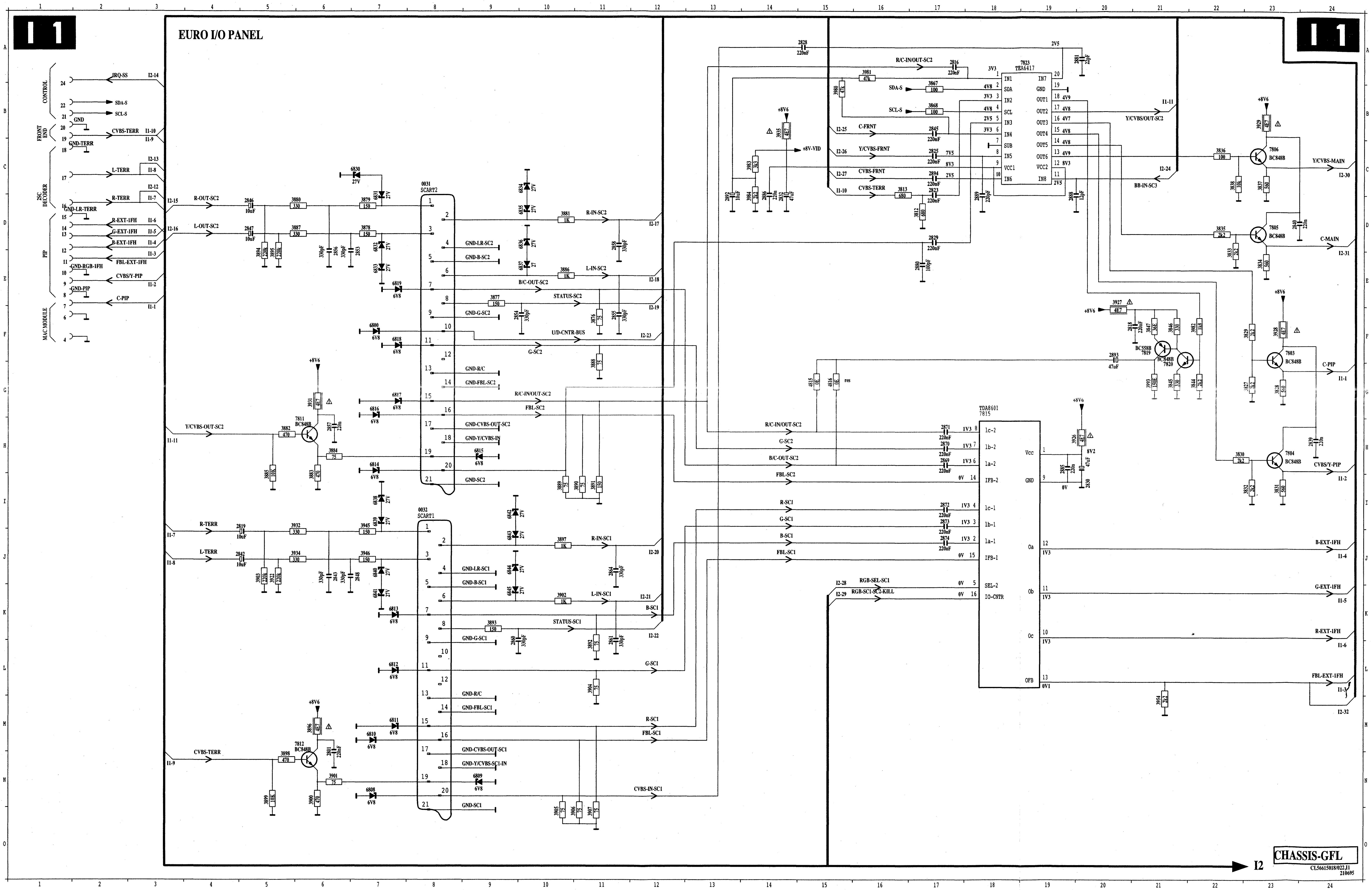
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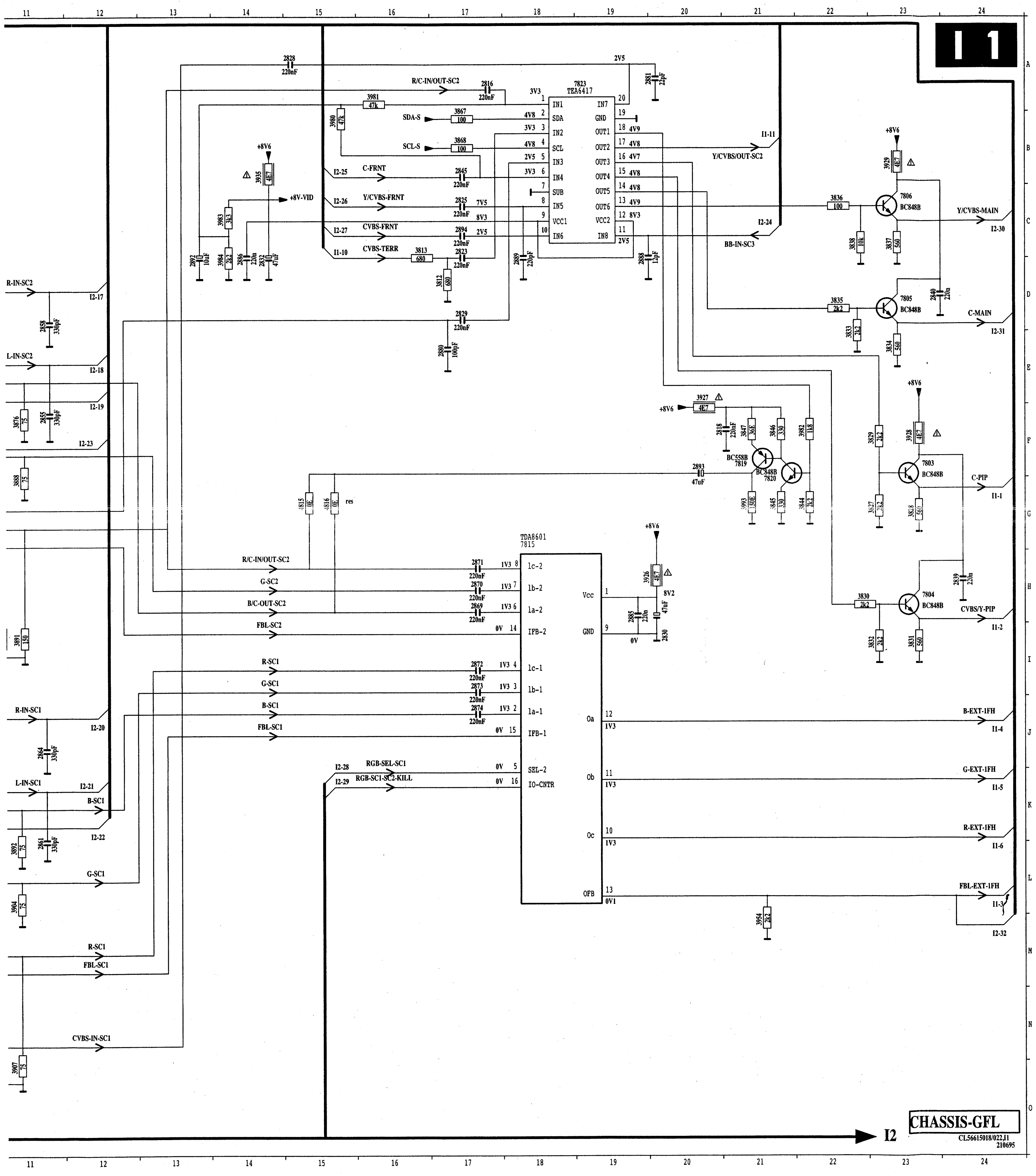
EURO I/O PANEL
CONTROL
FRONT END
2SC DECODER
PIP
MAC MODULE
0031 SCART2
0032 SCART1
7823 TEA6417
TDA8601 7815
7811 BC848B
7812 BC848B
7806 BC848B
7805 BC848B
7803 BC848B
7804 BC848B
BC558B 7819
BC848B 7820
Y/CVBS-OUT-SC2
CVBS-TERR
R-TERR
L-TERR
R-OUT-SC2
L-OUT-SC2
R-IN-SC2
L-IN-SC2
R-IN-SC1
L-IN-SC1
STATUS-SC2
STATUS-SC1
U/D-CNTR-BUS
B/C-OUT-SC2
R/C-IN/OUT-SC2
FBL-SC2
G-SC2
R-SC1
G-SC1
B-SC1
FBL-SC1
CVBS-IN-SC1
Y/CVBS-MAIN
C-MAIN
C-PIP
CVBS/Y-PIP
B-EXT-1FH
G-EXT-1FH
R-EXT-1FH
FBL-EXT-1FH
RGB-SEL-SC1
RGB-SC1-SC2-KILL
BB-IN-SC3
Y/CVBS/OUT-SC2
SDA-S
SCL-S
+8V6
+8V-VID
CHASSIS-GFL
CL56615018/022.J1
210695
I2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A B C D E F G H I J K L M N O
7823
TEA6417
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SDA
IN2
SCL
IN3
IN4
SUB
IN5
VCC1
IN6
IN7
GND
OUT1
OUT2
OUT3
OUT4
OUT5
OUT6
VCC2
IN8
R/C-IN/OUT-SC2
SDA-S
SCL-S
C-FRNT
Y/CVBS-FRNT
CVBS-FRNT
CVBS-TERR
I2-25
I2-26
I2-27
I1-10
I1-11
Y/CVBS/OUT-SC2
I2-24
BB-IN-SC3
+8V6
+8V-VID
7806
BC848B
Y/CVBS-MAIN
I2-30
7805
BC848B
C-MAIN
I2-31
7803
BC848B
C-PIP
I1-1
7819
BC558B
7820
BC848B
7804
BC848B
CVBS/Y-PIP
I1-2
res
R-IN-SC2
I2-17
L-IN-SC2
I2-18
I2-19
I2-23
TDA8601
7815
1c-2
1b-2
1a-2
IFB-2
1c-1
1b-1
1a-1
IFB-1
SEL-2
IO-CNTR
Vcc
GND
Oa
Ob
Oc
OFB
R/C-IN/OUT-SC2
G-SC2
B/C-OUT-SC2
FBL-SC2
R-SC1
G-SC1
B-SC1
FBL-SC1
R-IN-SC1
I2-20
L-IN-SC1
I2-21
I2-22
I2-28
RGB-SEL-SC1
I2-29
RGB-SC1-SC2-KILL
B-EXT-1FH
I1-4
G-EXT-1FH
I1-5
R-EXT-1FH
I1-6
FBL-EXT-1FH
I1-3
I2-32
CVBS-IN-SC1
I2
CHASSIS-GFL
CL56615018/022,I1
210695

0031	C 8
0032	I 8
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2818	F20
2819	I 5
2823	C17
2825	C17
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2829	D17
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2839	H24
2840	D23
2842	J 5
2843	J 6
2845	B17
2846	D 5
2847	D 5
2848	J 7
2853	D 7
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2864	J11
2869	H17
2870	H17
2871	H17
2872	I17
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2881	A20
2885	H19
2886	C14
2888	C19
2889	C18
2892	C13
2893	F20
2894	C17
3812	D17
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3832	I23
3833	D22
3834	E23
3835	D22
3836	C22
3837	C23
3838	C22
3844	G22
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3878	D 7
3879	D 7
3880	D 6
3881	D10
3882	H 5
3883	H 6
3884	H 6
3885	H 5
3886	E10
3887	D 6
3888	F11
3889	I10
3890	I11
3891	I11
3892	L11
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3946	J 7
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3981	A16
3982	F22
3983	C14
3984	C14
3993	G21
4815	G15
4816	G15
6800	F 7
6808	N 7
6809	N 9
6810	M 7
6811	M 7
6812	L 7
6813	K 7
6814	H 7
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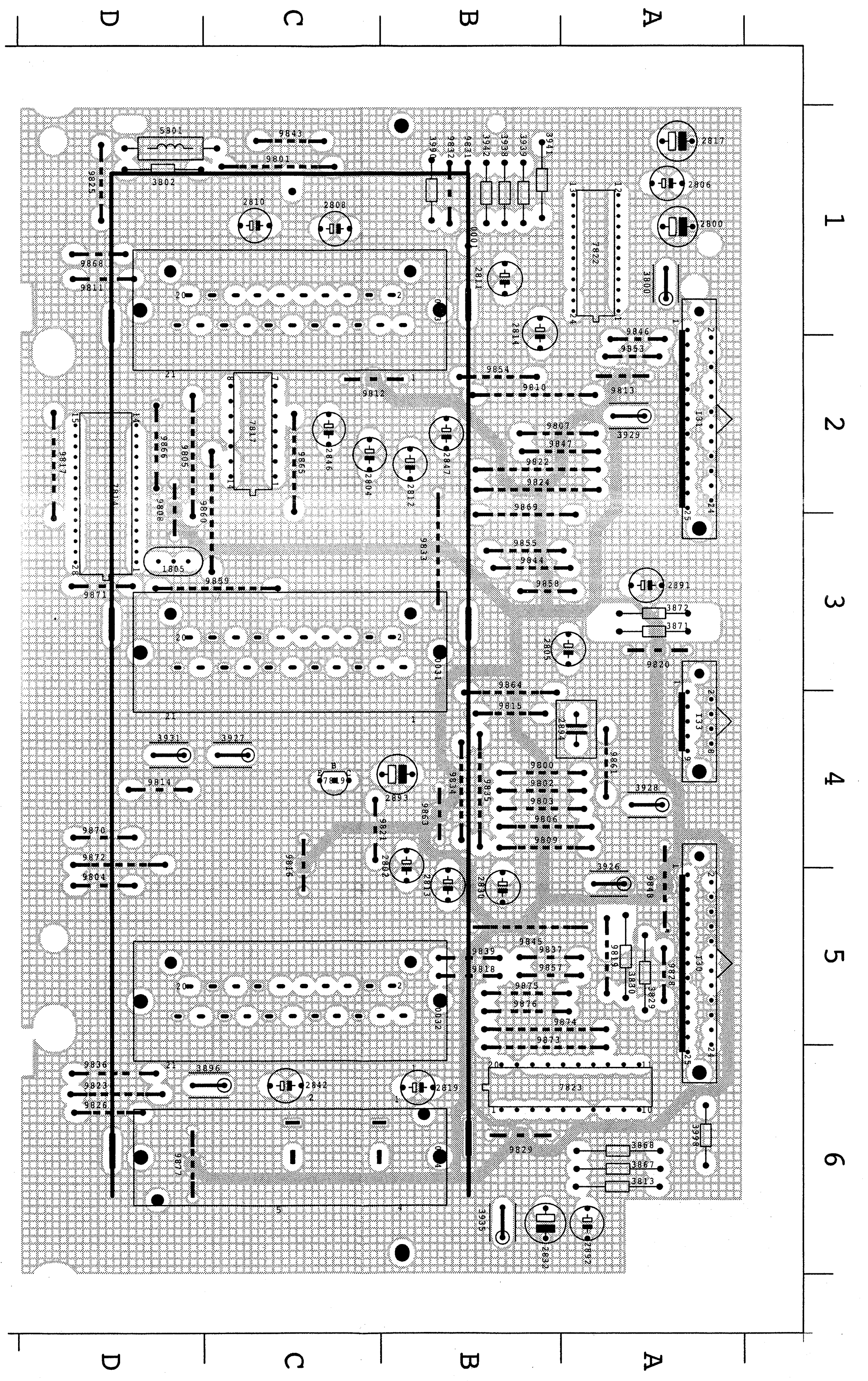
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Euro I/O panel

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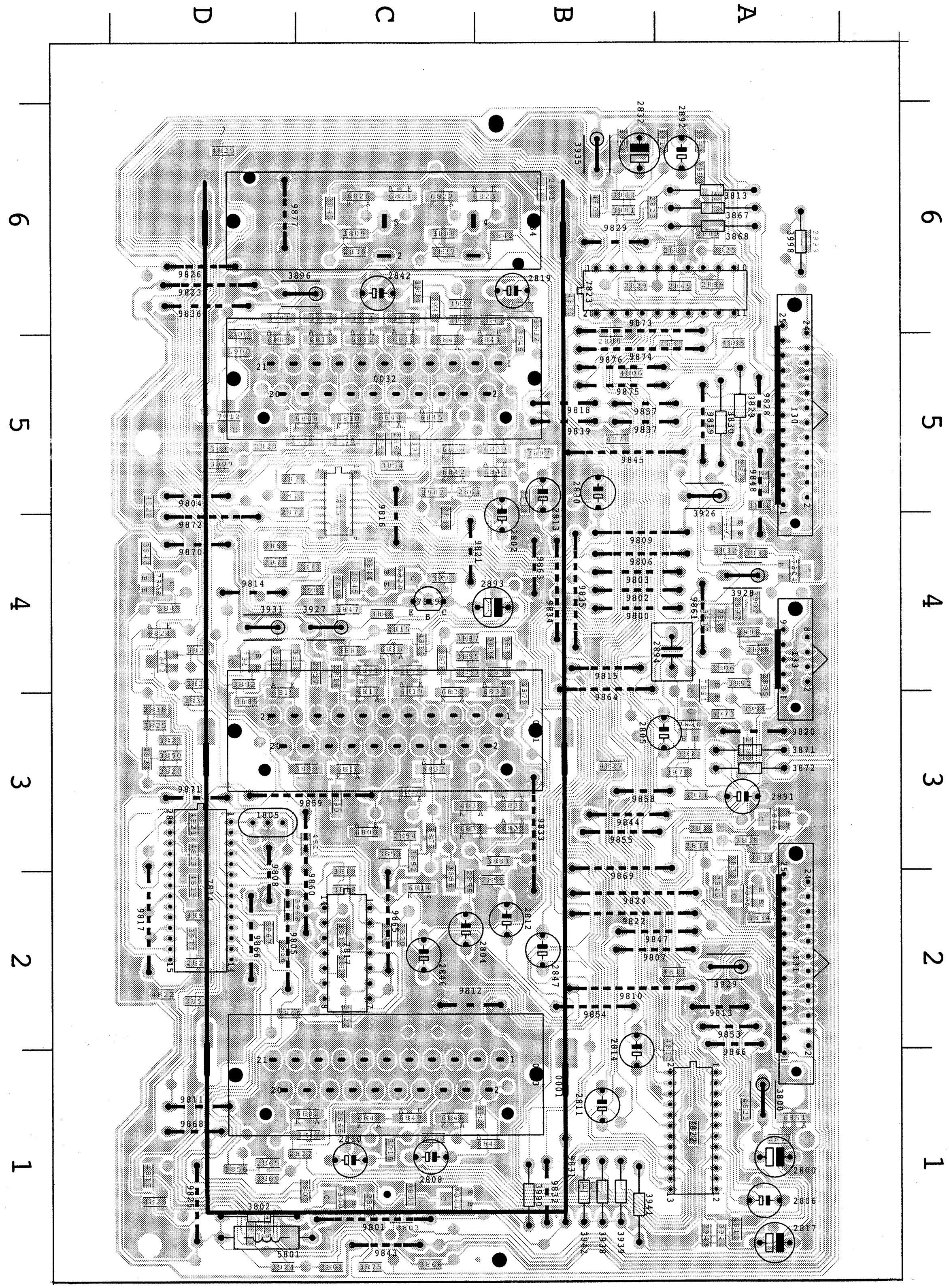
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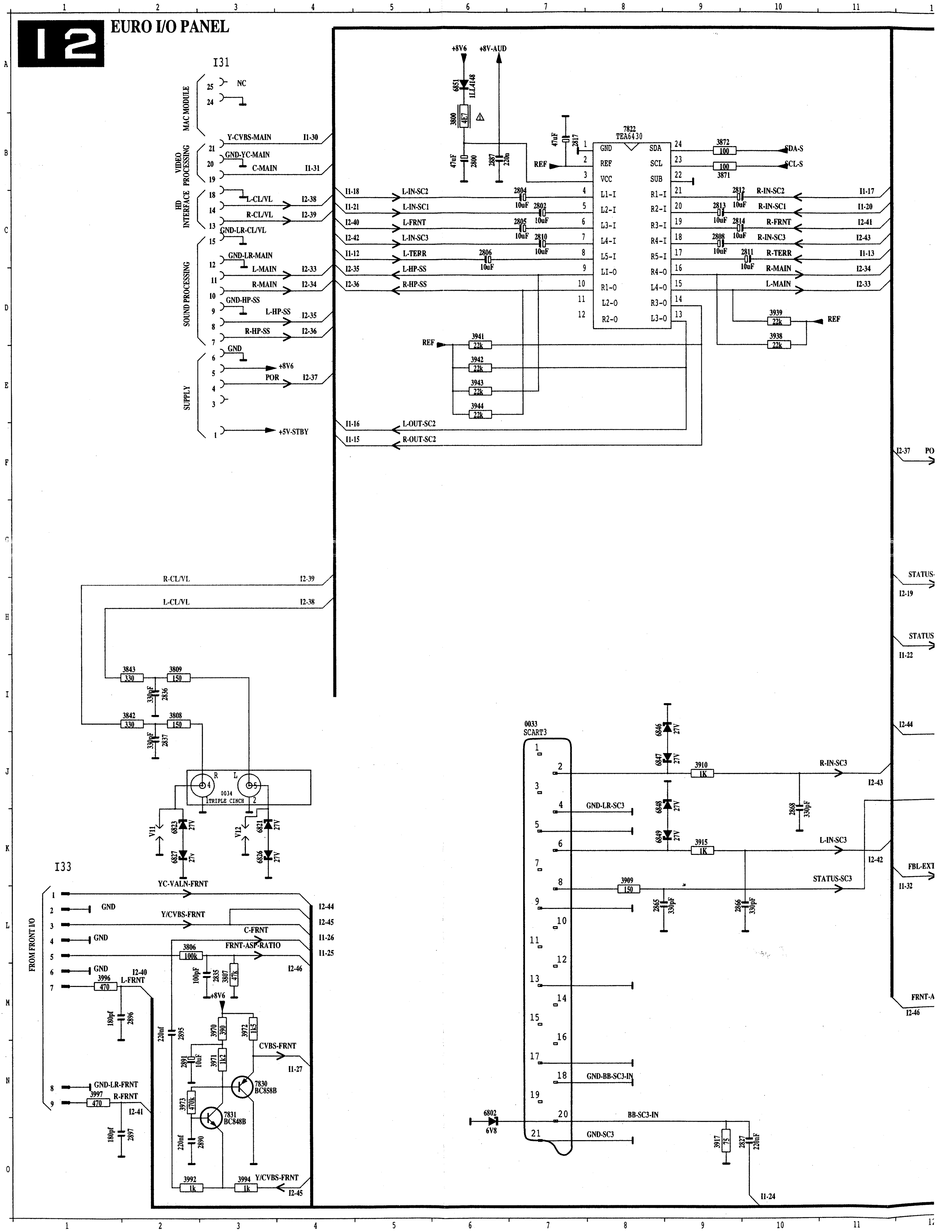
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EURO I/O PANEL
I31
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VIDEO PROCESSING
HD INTERFACE
SOUND PROCESSING
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GND-YC-MAIN
C-MAIN
L-CL/VL
R-CL/VL
GND-LR-CL/VL
GND-LR-MAIN
L-MAIN
R-MAIN
GND-HP-SS
L-HP-SS
R-HP-SS
GND
+8V6
POR
+5V-STBY
+8V-AUD
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1LL4148
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220n
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VCC
L1-I
L2-I
L3-I
L4-I
L5-I
LI-O
R1-O
L2-O
R2-O
SDA
SCL
SUB
R1-I
R2-I
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R5-I
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L-IN-SC3
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R-IN-SC1
R-FRNT
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R-TERR
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R-OUT-SC2
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L-CL/VL
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TRIPLE CINCH
R
L
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V12
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FROM FRONT I/O
YC-VALN-FRNT
Y/CVBS-FRNT
C-FRNT
FRNT-ASP-RATIO
GND-LR-FRNT
R-FRNT
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220nf
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1k5
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BC848B
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FRNT-A
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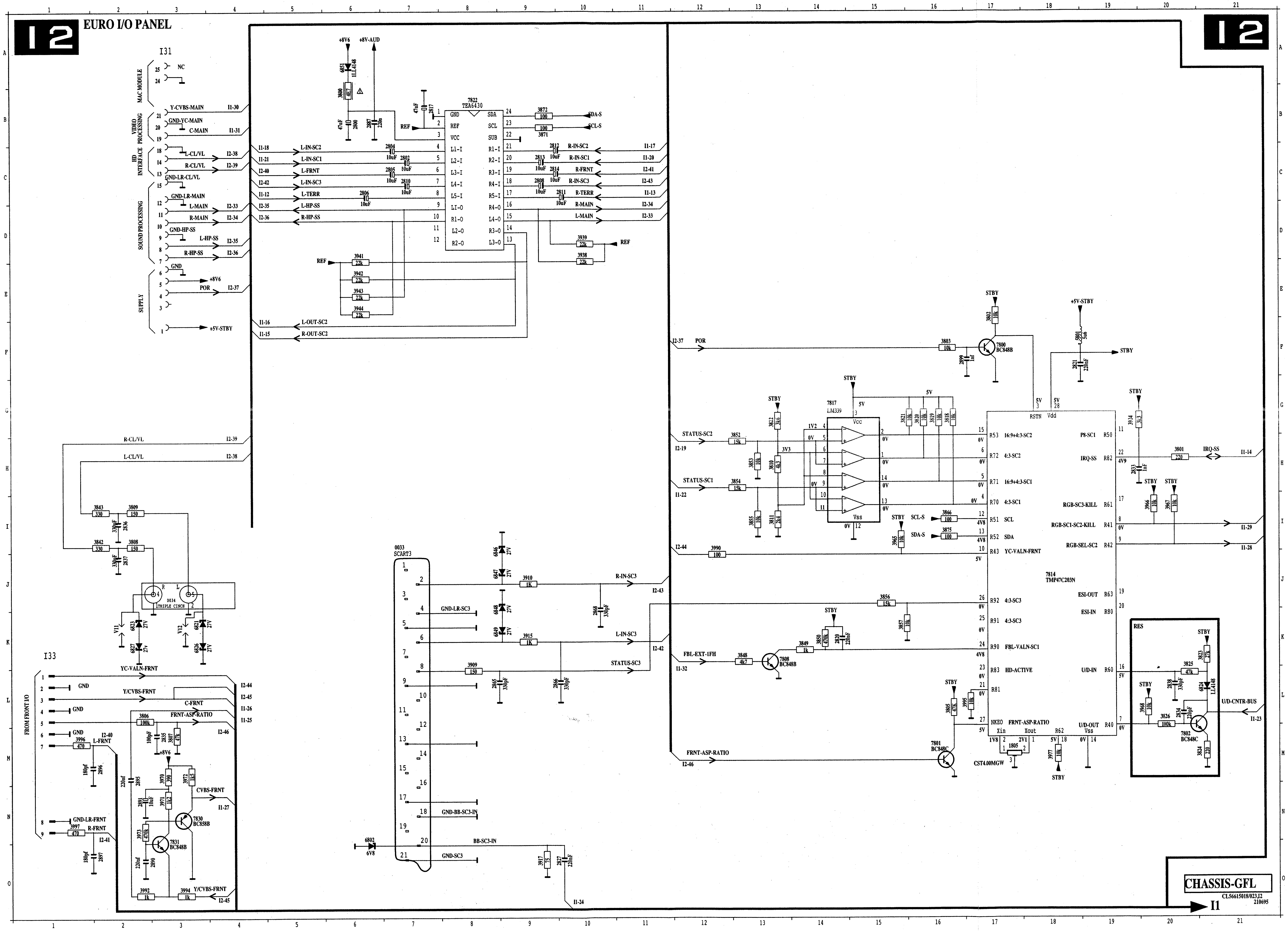
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EURO I/O PANEL
I2
I31
MAC MODULE
VIDEO PROCESSING
HD INTERFACE
SOUND PROCESSING
SUPPLY
Y-CVBS-MAIN
GND-YC-MAIN
C-MAIN
L-CL/VL
R-CL/VL
GND-LR-CL/VL
GND-LR-MAIN
L-MAIN
R-MAIN
GND-HP-SS
L-HP-SS
R-HP-SS
GND
+8V6
POR
+5V-STBY
7822
TEA6430
+8V-AUD
REF
L-OUT-SC2
R-OUT-SC2
0033
SCART3
0034
TRIPLE CINCH
I33
FROM FRONT I/O
YC-VALN-FRNT
Y/CVBS-FRNT
C-FRNT
FRNT-ASP-RATIO
CVBS-FRNT
L-FRNT
R-FRNT
GND-LR-FRNT
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BC848B
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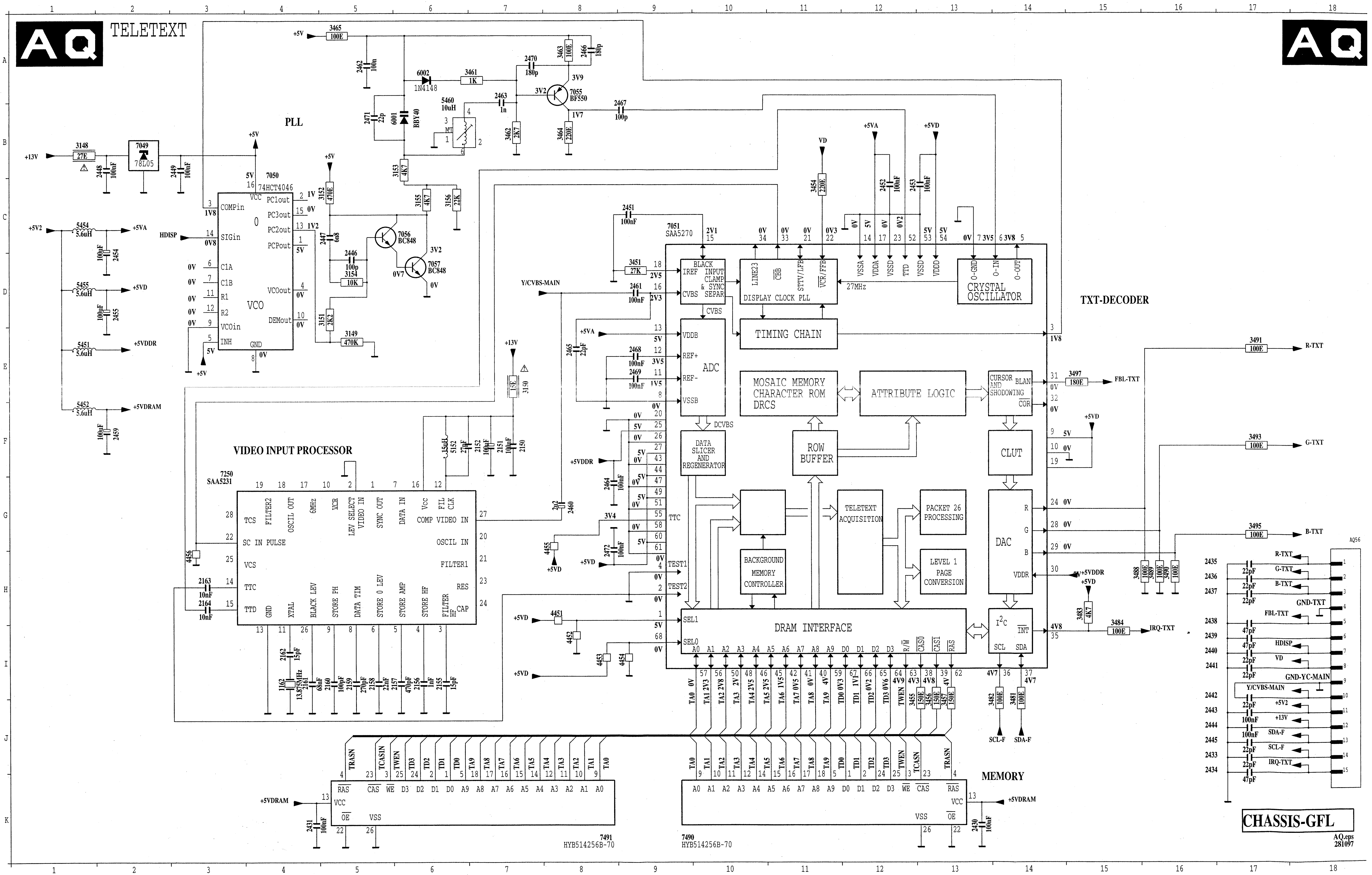
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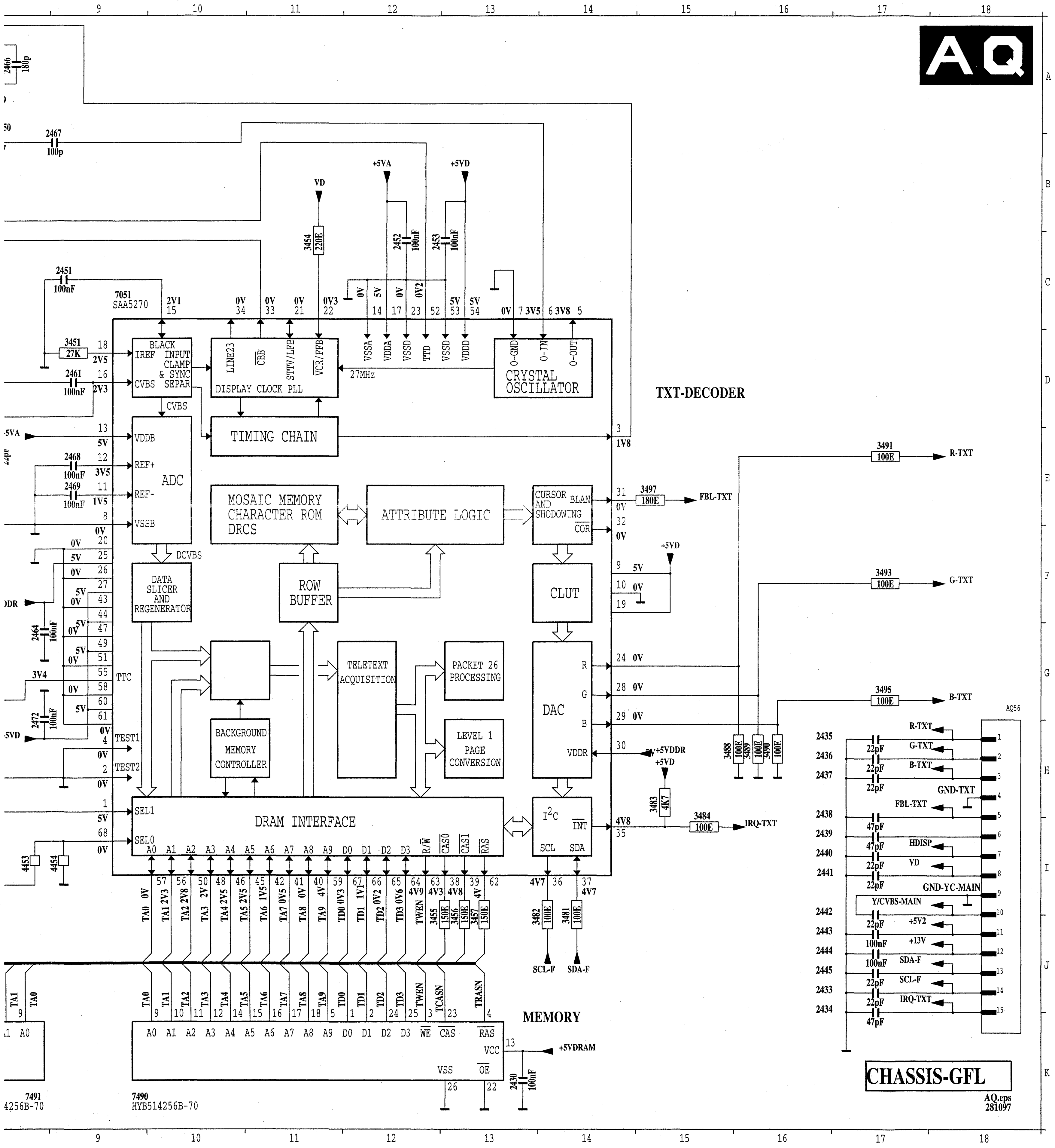
R2
VCOin
INH
GND
VCC
PC1out
PC3out
PC2out
PCPout
VCOout
DEMout
VCO
7049
78L05
3148
27E
+13V
HDISP
+5V2
+5VA
+5VD
+5VDDR
+5VDRAM
5454
5455
5451
5452
5.6uH
6002
1N4148
6001
BBY40
5460
10uH
7055
BF550
7056
BC848
7057
BC848
VIDEO INPUT PROCESSOR
7250
SAA5231
TCS
SC IN PULSE
VCS
TTC
TTD
FILTER2
OSCIL OUT
6MHz
VCR
LEV SELECT VIDEO IN
SYNC OUT
DATA IN
Vcc
FIL CLK
COMP VIDEO IN
OSCIL IN
FILTER1
RES
CAP
GND
XTAL
BLACK LEV
STORE PH
DATA TIM
STORE 0 LEV
STORE AMP
STORE HF
FILTER HF
13.875MHz
Y/CVBS-MAIN
7051
SAA5270
BLACK IREF
INPUT CLAMP & SYNC SEPAR
CVBS
LINE23
CBB
STTV/LFB
VCR/FFB
DISPLAY CLOCK PLL
27MHz
VSSA
VDDA
VSSD
TTD
VSSD
VDDD
O-GND
O-IN
O-OUT
CRYSTAL OSCILLATOR
TXT-DECODER
TIMING CHAIN
VDDB
REF+
REF-
VSSB
ADC
DCVBS
MOSAIC MEMORY
CHARACTER ROM
DRCS
ATTRIBUTE LOGIC
CURSOR AND SHODOWING
BLAN
COR
DATA SLICER AND REGENERATOR
ROW BUFFER
CLUT
TELETEXT ACQUISITION
PACKET 26 PROCESSING
LEVEL 1 PAGE CONVERSION
BACKGROUND MEMORY CONTROLLER
DAC
R
G
B
VDDR
TEST1
TEST2
SEL1
SEL0
DRAM INTERFACE
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 D0 D1 D2 D3 R/W CAS0 CAS1 RAS
I²C
INT
SCL
SDA
3491
3493
3495
100E
R-TXT
G-TXT
B-TXT
3497
180E
FBL-TXT
3484
IRQ-TXT
3483
4K7
SCL-F
SDA-F
MEMORY
7491
HYB514256B-70
7490
HYB514256B-70
RAS
CAS
WE
VCC
OE
VSS
TRASN
TCASN
TWEN
TD3
TD2
TD1
TD0
TA9
TA8
TA7
TA6
TA5
TA4
TA3
TA2
TA1
TA0
AQ56
GND-TXT
GND-YC-MAIN
Y/CVBS-MAIN
+13V
SDA-F
SCL-F
VD
CHASSIS-GFL
AQ.eps
281097

Teletext decoder panel


AQ
TXT-DECODER
7051
SAA5270
BLACK IREF INPUT CLAMP & SYNC SEPAR
CVBS
DISPLAY CLOCK PLL
LINE23
CBB
STTV/LFB
VCR/FFB
VSSA
VDDA
VSSD
TTD
VSSD
VDDD
O-GND
O-IN
O-OUT
CRYSTAL OSCILLATOR
27MHz
TIMING CHAIN
VDDB
REF+
REF-
VSSB
ADC
DCVBS
DATA SLICER AND REGENERATOR
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PACKET 26 PROCESSING
LEVEL 1 PAGE CONVERSION
BACKGROUND MEMORY CONTROLLER
DAC
R
G
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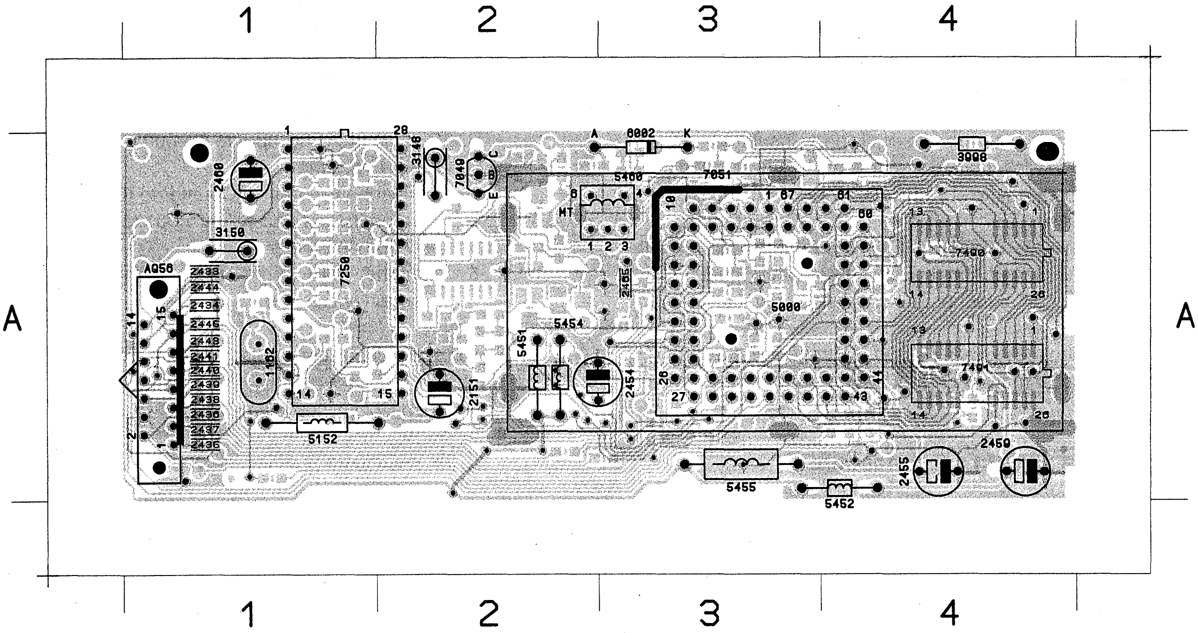
VDDR
TEST1
TEST2
SEL1
SEL0
DRAM INTERFACE
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 D0 D1 D2 D3 R/W CAS0 CAS1 RAS
I2C
INT
SCL
SDA
TTC
VD
+5VA
+5VD
3454 220E
2452 100nF
2453 100nF
2451 100nF
3451 27K
2461 100nF
2468 100nF
2469 100nF
2464 100nF
2472 100nF
2466 180p
2467 100p
4453
4454
3491 100E
R-TXT
3497 180E
FBL-TXT
3493 100E
G-TXT
3495 100E
B-TXT
3488 100E
3489 100E
3490 100E
+5VDDR
+5VD
3483 4K7
3484 100E
IRQ-TXT
3482 100E
3481 100E
SCL-F
SDA-F
3455 150E
3456 150E
3457 150E
TA0 TA1 TA2 TA3 TA4 TA5 TA6 TA7 TA8 TA9 TD0 TD1 TD2 TD3 TWEN TCASN TRASN
MEMORY
7490
HYB514256B-70
7491
4256B-70
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 D0 D1 D2 D3 WE CAS RAS
VCC
VSS
OE
+5VDRAM
2430 100nF
AQ56
2435 22pF
2436 22pF
2437 22pF
2438 47pF
2439 47pF
2440 22pF
2441 22pF
2442 22pF
2443 100nF
2444 100nF
2445 22pF
2433 22pF
2434 47pF
R-TXT
G-TXT
B-TXT
GND-TXT
FBL-TXT
HDISP
VD
GND-YC-MAIN
Y/CVBS-MAIN
+5V2
+13V
SDA-F
SCL-F
IRQ-TXT
CHASSIS-GFL
AQ.eps
281097
9 10 11 12 13 14 15 16 17 18
A B C D E F G H I J K

1162	I	4
2150	F	7
2151	F	7
2152	F	7
2155	I	6
2156	I	6
2157	I	6
2158	I	5
2159	I	5
2160	I	5
2161	I	4
2162	I	4
2163	H	3
2164	H	3
2430	K	13
2431	K	4
2433	J	16
2434	J	16
2435	H	16
2436	H	16
2437	H	16
2438	H	16
2439	I	16
2440	I	16
2441	I	16
2442	I	16
2443	J	16
2444	J	16
2445	J	16
2446	D	5
2447	C	5
2448	B	2
2449	B	3
2451	C	9
2452	C	12
2453	C	12
2454	C	2
2455	D	2
2459	F	2
2460	G	8
2461	D	9
2462	A	5
2463	A	7
2464	G	8
2465	E	8
2466	A	8
2467	B	9
2468	E	9
2469	E	9
2470	A	7
2471	B	5
2472	G	8
3148	B	1
3149	E	5
3150	E	7
3151	D	5
3152	C	5
3153	B	6
3154	D	5
3155	C	6
3156	C	6
3451	D	9
3454	C	11
3455	I	12
3456	I	13
3457	I	13
3461	A	7
3462	B	7
3463	A	8
3464	B	8
3465	A	5
3481	I	14
3482	I	14
3483	H	15
3484	I	15
3488	H	15
3489	H	16
3490	H	16
3491	E	17
3493	F	17
3495	G	17
3497	E	15
4451	H	8
4452	I	8
4453	I	8
4454	I	9
4455	G	8
4456	H	3
5152	F	6
5451	E	1
5452	F	1
5454	C	1
5455	D	1
5460	A	6
6001	B	5
6002	A	6
7049	B	2
7050	B	4
7051	C	9
7055	A	8
7056	C	6
7057	D	6
7250	F	3
7490	K	9
7491	K	8
AQ56	G	18

Teletext panel

1162 A 1
2151 A 2
2433 A 1
2434 A 1
2435 A 1
2436 A 1
2437 A 1
2438 A 1
2439 A 1
2440 A 1
2441 A 1
2443 A 1
2444 A 1
2445 A 1
2454 A 2
2455 A 4
2459 A 4
2460 A 1
2465 A 3
3148 A 2
3150 A 1
3998 A 4
5152 A 1
5451 A 2
5452 A 3
5454 A 2
5455 A 3
5460 A 2
6002 A 2
7049 A 2
7051 A 3
7250 A 1
7490 A 4
7491 A 4
AQ56 A 1


1
2
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4
A
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AQ56
7250
3148
7049
6002
5460
7051
5000
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7491
3998
1162
5152
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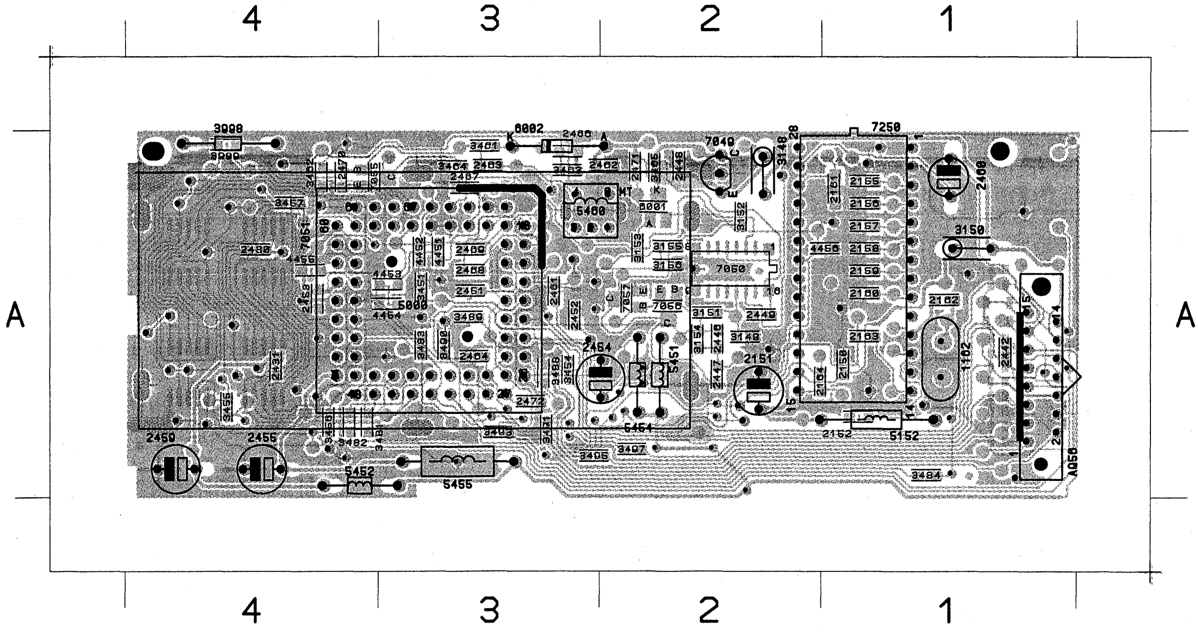
1162 A 1
2150 A 1
2151 A 2
2152 A 1
2155 A 1
2156 A 1
2157 A 1
2158 A 1
2159 A 1
2160 A 1
2161 A 1
2162 A 1
2163 A 1
2164 A 2
2430 A 4
2431 A 4
2442 A 1
2446 A 2
2447 A 2
2448 A 2
2449 A 2
2451 A 3
2452 A 3
2453 A 4
2454 A 2
2455 A 4
2459 A 4
2460 A 1
2461 A 3
2462 A 2
2463 A 3
2464 A 3
2466 A 3
2467 A 3
2468 A 3
2469 A 3
2470 A 4
2471 A 2
2472 A 3
3148 A 2
3149 A 2
3150 A 1
3151 A 2
3152 A 2
3153 A 2
3154 A 2
3155 A 2
3156 A 2
3451 A 3
3454 A 3
3455 A 4
3456 A 4
3457 A 4
3461 A 3
3462 A 4
3463 A 3
3464 A 3
3465 A 2
3481 A 4
3482 A 4
3483 A 3
3484 A 1
3488 A 3
3489 A 3
3490 A 3
3491 A 3
3493 A 3
3495 A 3
3497 A 2
3998 A 4
3999 A 4
4451 A 3
4452 A 3
4453 A 3
4454 A 3
4455 A 4
4456 A 1
5152 A 1
5451 A 2
5452 A 3
5454 A 2
5455 A 3
5460 A 2
6001 A 2
6002 A 2
7049 A 2
7050 A 2
7051 A 3
7055 A 4
7056 A 2
7057 A 2
7250 A 1
AQ56 A 1


4
3
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A
A
3998
6002
7049
3148
7250
2460
3150
7051
5000
5460
7050
2151
2454
5451
5454
1162
2162
5152
AQ56
2459
2455
5452
5455
3484

8. Electrical adjustments

***Caution:** The Large Signal Panel incorporates a "Hot" ground system. Always use a separate isolation transformer when applying power to the exposed chassis.*

8.1 Service adjustment notes

Unless Otherwise Specified:

1. All service adjustments are "hot" voltagewise. For maximum safety, ensure the use of properly insulated tools.
2. Many of the following adjustments are made through software intervention. The Dealer Service Tool (DST) (RC7150 is required in order to modify register values stored within the EEPROM IC on the Small Signal Panel.
3. Refer to the Component Location Diagram (Figure 1) for a quick location of test points or service adjustable controls.
4. Grid locations (Ex.: D-2) next to control reference numbers refer to the Printed Circuit Board Zone Locations.

8.2 High voltage adjustment procedure

EXERCISE EXTREME CAUTION WHEN ADJUSTING HIGH VOLTAGE.

Note: The following test equipment or equivalent should be used:

- High Voltage Probe.
- Digital Multimeter 1% DC accuracy or better and an input impedance of 10 Megohm +/-10%.

8.2.1 Initial PTV settings

- Turn the PTV on.
- Confirm that the 130V (TP4) is 130V +/- 1.0V.
  Perform the 130V adjustment if the voltage is not within specification.
- Select a non-used AUX input for a black picture.
- Turn the PTV off.

With the PTV off and unplugged, connect the High Voltage Probe as follows and adjust the high voltage:

1. Connect the ground lead to the chassis ground.
2. Connect the High Voltage Probe to the Digital Multimeter.
3. Set the Digital Multimeter to measure DC volts.
4. Remove one of the CRT anode connections from the High Voltage Combo Block.
5. Insert the probe tip into the open CRT anode connection of the High Voltage Combo Block.
6. Turn the PTV on.
7. Adjust R943, High Voltage Adjust, on the Large Signal Panel (zone H-1) for 30kV +/-200V.
8. Turn off the PTV.
9. Remove the High Voltage Probe.
10. Re-install the CRT anode connector into the Combo Block.
11. Turn the PTV on and confirm proper operation.

8.2.2 High Voltage Frequency Adjustment

Note: This control (R901) is located on the Large Signal Panel in zone area F-3.

1. Turn the set off and disconnect power supplied to the chassis.
2. Disable the High Voltage by shorting the collector of Q902 to ground.
3. Disable the sync input to IC900 by shorting the base of Q900 to ground.
4. Connect a Frequency Counter to IC900 Pin 1.
5. Turn on the set and adjust R901 to obtain a reading of 15.75kHz on the counter.
6. Turn the set off and remove the shorts as well as the Frequency Counter.

Note: Some Frequency Counters may be too sensitive at one attenuation level and not sensitive enough at an other. In this case, an oscilloscope may be used. Adjust R901 to obtain a 63.5uSec. delay from the leading edge of the first main pulse to the leading edge of the second main pulse.

8.2.3 +130Vdc B+ Adjust

Note: This control (R455) is located on the Large Signal Panel in zone area A-5.

Upon replacement of the Large Signal Panel, or if suspect of possible problems with the +130Vdc Source arise, check and adjust in the following manner:

1. Connect the positive lead from a .1% Digital Voltmeter to the +130Vdc Source (TP4).
2. Connect the negative lead to the isolated "Cold" ground on the left end of R405 (TP18).
3. Adjust R455 (also located in the top corner of the board) to achieve +130Vdc +/- .5Vdc).

8.3 Programming factory default values

The chassis is controlled by an on-board microcomputer and peripheral parts, altogether known as a "tuning system".
The customer picture and sound adjustments are made using either the on-set keyboard or the remote transmitter to enter commands. There are on-screen graphics to show the "menu" list of adjustments.

Service mode makes it possible to change the values of special memory registers in the EEPROM. These registers control the customer adjustments, PIP setups, graphics intensity and clock calibration. These registers also make many other service adjustments possible that previously would have been handled by conventional controls mounted on the P.C. Board.

8.4. CVBS level adjustment on the small signal panel

Feed a CVBS colour bar signal with an amplitude of 700mV (between black and white level) to pin 20 of EXT1 and select the display from EXT1.
Using R3161 on the SSP [S5] adjust the amplitude of the signal on pin 8 of IC7500 (TDA4780) on the SSP [S6] to 325mV (between black and white level).

8.5 Adjustment of the PIP module [P]

This adjustment is only applicable to PIP modules equipped with a tuner.

Introduction
The AGC adjustment prevents the PIP tuner from being overdriven by a strong aerial signal. Overdriving is visible as a loss of colour and synchronisation in the PIP picture. The amplification must be adjusted to minimum level, but the signal should be as free from noise as possible. At maximum amplification R3912 is fully left, on minimum amplification R3912 is fully right.

Adjustment
Feed in a (strong) aerial signal of 4mV (72dBµV).
Turn R3912 fully right (minimum amplification). Turn R3912 slowly left until the noise no longer decreases.
If an aerial signal is not available as a compromise adjust R3912 to 30% of the total adjustment range (100% is maximum adjustment, fully left).

8.6 Adjustments in the Service Alignment Menu

Description of Service Alignment Mode:
This service mode is used for changing control register values from their default values to new values - this includes all factory preset conditions.

To activate the Service Alignment Menu:
Briefly short circuit the service pins 'ALIGNMENT MODE" on the SSP.
or
Press the ALIGN key on the Dealer Service Tool (DST) (RC7150), followed by the password (3-1-4-0), then press the 'OK' Key.

The Service Menu will now appear on the screen.
This displays the following information:

1. The software date ('Date') and version ('Ver') of the ROM.
2. The total number of operation hours ('Operation Hours').
3. The contents of the error buffer ('Errors").
   The most recent error is at the top, immediately following the ('Errors') indication.
4. The Module that generated the error ('Defect. Module') (If there are more errors in the module not caused by one individual module there is probably another error).
   The message 'UNKNOWN' is then displayed here.
5. Menu item 'Reset Error buffer'. The error buffer can be reset via the 'OK' Key.
6. Menu item 'Functional Test'. Al devices are tested via the 'OK' Key. Eventually errors are displayed at the error buffer location. (The error buffer is not erased;
   the contents return when the Functional Test is closed).
7. Menu item 'Alignments'. This enables the Alignments sub menu to be called up.

Inside the 'Alignments' sub menu the following adjustments may be selected.

- 'General': Adjustment of 'White Drive', 'Cut-off', 'Soft Clipper', 'Peak White Limiter', 'PIP Brightness', 'Input level Stereo decoder', 'Stereo channel separation'.
- 'Normal Geometry': General geometry adjustments.
- 'Super Wide Geometry': Geometry adjustments of the 'Panorama' position in 16:9 sets (not for other positions.
- 'Options': Setting of the initialization codes in the set via text.
- 'Option Number': All options together, expressed in two long numbers.
- 'Store': Preserving all adjustments.

8.7 The adjustments

8.7.1 *General*

- After all adjustments have been completed the item 'STORE' must be selected to store all values in the permanent memory.
- When the option codes have been modified and stored the set should be switched off and on again with the mains switch in order to activate the new adjustments. (When switching off and on via stand-by the option code settings are NOT read in by the microprocessor).
- If an empty EAROM (permanent memory) is detected all options receive the pre-programmed standard values.
- In various menus a built-in test pattern can be called up. The test pattern generator can be activated with the item 'TEST PATTERN ON/OFF'. The test pattern only appears following the selection of the specific adjustment. The test patterns are generated by the teletext module.

8.7.2 *PIP Brightness*

Adjust PIP brightness in such a manner that the brightness of the PIP picture is the same as the main picture.

8.7.3 *Stereo Decoder input level*

Feed in an aerial signal with a PAL BG signal and tune the set.
Select audio mode DUAL and modulate both audio channels with a 1kHz signal with equal amplitude. Adjust 'Input Level Stereo Decoder' to equal sound volume levels for language selections I and II.

8.7.4 *Stereo Channel Separation*

Feed in an aerial signal with a PAL BG signal and tune the set.
Select audio mode STEREO and modulate the right channel with a 1kHz signal, and the left channel with no signal. Switch off the right loudspeaker or adjust the audio balance fully left. Adjust 'Stereo Channel Separation' to minimum sound reproduction from the left loudspeaker.

8.7.5 *Options*

Introduction
The microprocessor communicates with a great number of IC's in the set. For good communication, and to make digital diagnosis possible, the microprocessor has to know which IC's have to be addressed. The presence of specific IC's or functions is make known with the aid of the option codes. Only correctly set option codes ensure a correctly functioning set, and the correct error message in case of a defect.
The options are divided into different groups. These groups contain the various options for which multiple choices are usually possible.

An overview follows below: (See Table)

TV Systems	Tuner Type	FQ916 (D) ME FQ916 (D) MF FQ916MR, FV916MG, FQ916MD, FQ936E, FS988, Chinese Tuner, FQ944D	Select Tuner Type (Type number is on the tuner)
Stereo Decoder	Nicam Type	Not Available BG or I BG + I	No Nicam Nicam with 2 IC's and 1 input filter Nicam with 2 IC's and 2 input filters
	2 CS	Yes No	TDA9840 present on SSP TDA9840 not present on SSP
	Global	Yes No	Global Sound Decoder present Global sound Decoder not present
Satellite	Sat. Mod. Available	Yes No	Satellite module present Satellite module not present
	Pulse Magnetic	Yes No	Polarizer panel present Polarizer panel not present
PIP	PIP Available	Yes No	PIP module present PIP module not present
	PIP Version	Euro Latam Japan	European PIP module South American PIP module (reserved) Japanese PIP module (reserved)
	PIP Tuner Type	Not Available Euro Latam Japan	no PIP tuner European PIP tuner South American PIP tuner (reserved) Japanese PIP tuner (reserved)
	PIP processor	PIP 1 PIP 2	PIP with TDA4650 (no longer used) PIP with TDA8310
	Triple PIP	Yes No	reserved
	Forced Colour	Yes No	For PIP 1 yes For PIP 2 yes, if PCF8574 is present
Teletext	TXT	Not Available mem-128 mem-512 mem-1M	Not available 128 kB teletext memory 512 kB teletext memory (1x514256) 1 MB teletext memory (2x514256)
Communication	D2B	Yes No	D2B connector present D2B connector not present
	ESI	Yes No	reserved
	EACAM	Yes No	reserved
	Project 50	Yes No	reserved
Video	Frame	Digital Scan 100/120 Hz 50/60 Hz	Feature Box Present Eco Feature box present No Feature Box present Comb Filter
	Comb Filter	Not present SAA4961 MC141625	No comb filter present Comb Filterwith SAA4961 Comb Filter with MC141625
	SCAVEM	No Yes	SCAVEM without TDA8444 SCAVEM with TDA8444
Source Selection	SS Type	Euro AV1 Euro AV2 Cinch AV1 Cinch AV2	Fully populated double sided Euro I/O Panel (Euro) Semi populated double-sided EURO I/O Panel (ECO) CINCH I/O Panel CINCH I/O Panel
	Euro AV3	None Normal	No 3rd EURO Connector (only with EURO I/O) 3rd EURO connector present
	Euro AV4	None Normal	No 4th EURO Connector (only with EURO I/O) 4th EURO connector present
	Euro AV	No Yes	No EURO Connector (only with EURO I/O) EURO Connector present
CRT Type	4:3 16:9		4:3 Picture Tube 16:9 Picture Tube
Audio Repro	Basic Equalizer Eq. + Dolby		TDA9860 present on SSP AFU Panel without Dolby AFU Panel with Dolby
Digital Output	No Yes		No digital output present Digital output present (NICAM also present)

Table 8.1

Option Number

If the EAROM has to be replaced all the options have to be set again. In order to be certain that the factory settings can be reproduced exactly the HW Opt No (Hardware Option Number) and the SW Opt No (Software Option Number) have to be set.

8.7.6 *Picture Height Adjustment*

1. Enter the Service Mode via the previous procedure and apply a crosshatch pattern to the antenna input terminals.
2. Adjust the Picture Height Register to obtain a slight underscan of the raster at the top and bottom of the screen.
3. Adjust the Picture Height Register to obtain a slight overscan at the top and bottom portions of the screen (approx. 8% overscan total).

8.8 Focus adjustments (Electrical and Optical)

Control Preset Positions

1. Picture, Sharpness, Brightness and Tint settings at mid-range.
2. Color setting at minimum.

8.8.1 *Electrical focus*

1. With the set tuned to a crosshatch pattern this adjustment can be made from the back of the set (remove the light shield if present). The pattern will appear clearer if the front of the screen is covered (covered with a dark cloth).
2. Cover two of the CRT's Output Lenses with a 7" X 7" piece of cardboard.
3. Observe the magnified reflections of the individual picture tubes on the back side of the viewing screen.
4. Adjust the respective focus control (top row of HV/ Focus Distribution Block) for optimum mid-screen focus.
5. Confirm correct focus by viewing the screen from the front of the unit.
6. Repeat steps 2 through 5 to focus the remaining two CRT's.

8.8.2 *Optical focus*

1. This adjustment can be made through the back of the set (remove the light shield if present), viewing a crosshatch pattern on the back of the screen.
   The pattern will appear clearer if the front of the screen is covered (covered with a dark cloth).
2. Cover two of the CRT Output Lenses with a 7"X 7" piece of cardboard.
3. Carefully loosen the Lens retaining wing nuts on the CRT Output Lens and the Housing Assembly.
4. Move the wingnut posts in the slot of the uncovered Lens to locate the optimum optical focus point (viewing the picture from the back side of the screen), re-tighten the wing nuts.
5. Confirm correct focus by viewing the screen from the front of the unit.
6. Repeat steps 2 through 4 for the remaining two Output Lenses.

8.9 Gray scale and black & white tracking (VG2 ADJ.)

1. Remove the Light Barrier (if present) in order to view the Main Lens Output of each Picture Tube.
   Note: Any dust should be cleaned from the Output Lenses, Mirror and back side of the Screen with a soft cloth.
2. Apply a signal Generator, display the Gray Scale Graduation pattern. Or, if not available, select a good channel containing high contrast program material.
3. Turn the set on and tune to the applied signal.
4. Set the customer Picture control to 3/4 range, set the Sharpness, Brightness and Tint to mid-range. Set customer Color to minimum.
5. Enter the 'General' menu from the Service Alignment Menu.
6. Confirm that the White Drive Control is OFF.
7. Confirm that R,G,B is ON.
8. Switch VG2 adjust to ON. (Picture will go dark.)
9. Turn all VG2 Controls (Bottom Row on the HV/Distributer Block) to minimum (Fully CCW).
10. Looking into the Output Lens, bring each of the G2 (Screen) controls (Bottom Row on the HV/Distributor Block) up to barely light each tube. Set as dim as possible but make the apparent brightness of each the same.
11. Exit the 'VG2' alignment.

8.10 Centering, Geometry and Convergence Adjustments

Important:

Unlike many previous PTV systems, the GFL6D series chassis incorporates a Digital Convergence Panel.
This panel does not contain the familiar three rows of adjustment potentiometer as employed in the past PTV systems. Instead Geometry and Screen Convergence settings are contained within the EEPROM located on the Convergence Panel. These settings may be easily modified through the following procedures.

Notes on Digital Convergence

1. When aligning the digital convergence, the adjustments are very interactive in that a change in one quadrant will potentially effect other areas of the screen; thus, requiring several alignment passes through the convergence sequences.
2. A convergence panel severely out of convergence will not necessarily have perfect icon shapes. its not uncommon to see bent or twisted icon's.
3. In some instances to initiate icon movement with one of the arrow functions on the remote transmitter, it may require the technician to hold the desired button for several moments to see movement, this is normal.
   If movement doesn't occur, continue the alignment sequence in other areas of the screen (use icon positioning keys 2,4,6,8), then return to the problem area of the screen. The technician may need to save present settings then exit to the convergence menu, then return to the problem area of the screen.
4. Remember the adjustment points are highly interactive with each other. A change in one quadrant of the screen could effect other areas.
5. When converging be sure your at eye level with the area of the screen you are adjusting.

Digital Convergence Alignment of the Chassis consists of any one or a combination of the following procedures described below.

A. The first procedure "Convergence Touch Up" allows for minor convergence adjustment of any color.
   With "Convergence Touch Up" it's assumed that one or two of the colors are geometrically correct and used as reference for the color/s requiring alignment. This alignment is required for minor convergence adjustments, single yoke or CRT replacements and any physical alteration of the Lens/CRT Assembly.

B. The second procedure "Mechanical Alignment" is required with Major Convergence and Geometry Alignments, Yoke replacement, Convergence Module Replacement and the replacement of a CRT or physical alteration of the Lens/CRT Assembly.

C. The third procedure "Major Convergence/Geometry Alignment" is required when a Convergence Module or all three CRT's are replaced. This procedure is also required if the Green Geometry requires adjustment.

Note: If the Screen Geometry of the Red or Blue gun is correct, use the "Convergence Touch Up" procedure to converge the green using the Red or Blue as a reference.
The set should be warmed up for at least 20 minutes prior to making any Convergence or Geometry adjustments.

8.10.1 *Convergence service mode procedures*

Note: This procedure is required for all of the following Geometry and Convergence procedures.
Using the Remote Transmitter, enter the Convergence Menu.

The "Convergence Menu" will appear offering the following choices:

- Introduction Page
- Selection Page
- Converging Page
- Continuation Page

The Introduction Page offers two choices:

• OK:	Continues to selection page
• MENU:	Exits without saving

The Selection Page offers:

• 1.	Select Green
• 2.	Select Red to Green
• 3.	Select Blue to Green
• 4.	Select Green to Red
• 5.	Select Green to Blue
• MENU:	Exits without saving

The converging Page offers:

• Cursor Keys:	Adjust convergence cross position
• 2.	Moves Cross Up
• 8.	Moves Cross Down
• 4.	Moves Cross Left
• 6.	Moves Cross Right
• OK.	Continuation Page
• MENU:	Exits without saving

Note: Cross starts at center of screen.

The Continuation Page Menu offers:

• 1.	Exit Convergence mode and saves changes.
• 2.	To Selection Page to repeat convergence procedure.
• MENU:	Exits without saving.

Note: Video information must be present to correctly adjust the convergence. A signal source is required to lock the vertical and horizontal sync. After entering the "Convergence Service Mode" verify the presence of a video source by confirming the presence of active audio (use the volume up function on the remote). Use the channel up and down function on the remote to select the desired tuning source.

8.10.2 *Convergence touch up procedure*

1. Enter the "Convergence Service Mode" as described above in the "Convergence Service Mode Procedure".
2. Select the desired color requiring adjustment.
   Note: Do not select Green Geometry (1). This procedure is described under "Major Convergence/Geometry Alignment. If Green Geometry is altered during this procedure a "Major Convergence/Geometry Alignment" could be required.
3. Cover the Output Lens of the single color presently NOT being adjusted. Example: If you select Green to Red Convergence (4) cover the Blue Output Lens.
4. The highlighted adjustment Icon (Cross) should be illuminated on the middle left side of the screen.
   Make the necessary Convergence Adjustments using the following Remote Keys:
   - Use the Cursor Up Key to adjust the selected color up.
   - Use the Cursor Down Key to adjust the selected color down.
   - Use the Cursor Right Key to adjust the selected color to the right.
   - Use the Cursor Left Key to adjust the selected color to the left.
5. Move to the next location to be converged. It is not required that the full Convergence Sequence be followed while performing the "Convergence Touch Up Alignment Procedure". The following alternate Remote Keys allow for positioning of the Icon to the desired adjustment location:
   - Key 2 on the Remote Transmitter will position the Adjustment Icon upward on the screen.
   - Key 8 on the Remote Transmitter will position the Adjustment Icon downward on the screen.
   - Key 4 on the Remote Transmitter will move the Adjustment Icon to the Left.
   - Key 6 on the Remote Transmitter will move the Adjustment Icon to the Right.
6. Return to the "Convergence Service Menu".
7. Repeat steps 1 through 6 for other required Convergence Alignments.
8. To Save the Adjustment completed in the last procedure, enter the continuation page of the Convergence Menu. This forces the corrections to be written to the EEPROM on the Convergence Module.

8.10.3 *Major convergence/geometry alignment procedure*

Major Convergence/Geometry alignment procedures are required when replacing the Digital Convergence Module or all three CRT's require replacement.

Note: The following procedure must be followed in the order listed to insure satisfactory results. Use the following order to converge a set requiring "Major Convergence/Geometry Alignment":

1. CRT Centering using the Centering Tabs around the Yoke.
2. Align the Convergence by first setting the Green Geometry using the "Convergence Template" and following up with the Red and Blue Convergence Alignment.

8.10.4 *CRT screen centering*

1. Locate the Screen Center by placing strings diagonally across the viewing area of the screen from corner to corner. The Screen Template", if centered correctly on the screen, can also provide the center point location.
2. Enter the **"Normal Screen Geometry"** Menu and confirm the values of the following registers.

Test Pattern	OFF
Vertical Shift	0
Picture Height	18
V Comp	0
V Linearity	11
V S Correction	15
Horz Phase	30
Picture Width	39
East/West Parabola	17
East/West Corner	0
Trapezium	57
Horz Comp	0
V SS Corr	0

3. Connect a Signal Source (pattern generator) to the antenna terminal of the set. A signal source must be present while following these procedures.
4. Enter the 'Convergence' Menu'.
5. **Place a jumper wire from Pins 1 To 2 of Test Point 4 (TP4) on the Convergence Panel.**
6. Select "1" Green Geometry from the Convergence Selection Menu. Cover the Red and Blue output lens using a 7" X 7" piece of cardboard.
7. The highlighted icon (cross) will be visible at the screen's center upon entry into this alignment mode.
8. Using the Centering tabs of the yoke, position the highlighted Green icon to the screen center as defined by the diagonal strings positioned across the viewing area of the screen or using the center point on the screen template.
   Note: In some cases there may be insufficient range with the centering tabs to position the Green icon to the screens center. In this case position the icon as close as possible to the screen center.
9. Confirm the centering by viewing the screen from the front of the unit.
10. Return to the Convergence Selection Menu. Select number "2" on the remote to activate the "Red to Green" Convergence. Cover the Green and Blue output lenses with a 7" X 7" piece of cardboard. Repeat step 7 through 9 using the Red yoke Centering Tabs.
11. Return to the Convergence Service Mode Menu by selecting "3" on the remote transmitter. Select "2" to repeat convergence. Select "3" on the remote to activate the "Blue to Green Convergence". Cover the Red and Green output lenses with a 7" X 7" piece of cardboard. Repeat step 7 through 9 using the Blue yoke Centering Tabs.
12. To exit and save the alignments return to the Continuation page and press '1' on the remote transmitter. Remove the 7" X 7" pieces of cardboard from the output Lenses. CRT centering is complete.
13. **Remove the jumper from TP4 on the Digital Convergence Module.**

8.10.5 *Green geometry*

The Green Geometry must be accurately adjusted to achieve proper convergence and screen geometry. The Red and Blue displays will individually be made to conform to the Green.

1. Confirm the CRT Centering as described in the previous procedure.
2. Remove the protective screen enhancement filter (if present) to make the following adjustments.
3. Attach the "Screen Template" to the screen using a low tac tape.
4. Enter the Converging Page with the Remote Transmitter.
   Note: Video Information must be present to correctly adjust the convergence. This can be checked by the presence of audio on the channel selected.
   The suggested method for convergence is to start at the left edge of the screen on the middle row of convergence points. Then as convergence is achieved at that point move to the right one point at a time until reaching the end of that row. At this time move the convergence icon to the next row up and all the way to the left side of the screen. Move to the right one point at a time until reaching the end of that row. Once again move the icon to the next row up and all the way to the left of the screen. When all the rows above the middle row have been converged move to the left side of the screen and one row below the middle. proceed to the right on point at a time and down one row at a time.
5. Select "1" Green Geometry. The Green icon should be positioned at the center of the screen (move the icon to the left side of the screen and on the middle row of the template). If not visible hold the right arrow key of the Remote Transmitter until the icon is visible on the screen. Use the number keys 2,4,6, and 8 to position the icon on the screen to the next point in the convergence sequence. Move the Green icon using the Remote Transmitter cursor buttons **Only Half Way** towards the next template point. Continue through the whole Green Geometry Sequence moving the Green icons **Only Half Way** towards the target point on the template. Upon reaching the last point in the sequence press the 'MENU' to return to the selection page.
6. Re-select the number "2" on the Remote Transmitter to repeat the Green Geometry alignment. Follow the Green Geometry Sequence through a second pass, this time accurately aligning the Green icon to the alignment points on the template. Repeat the Green Geometry Sequence as required. When completed Exit/Save the changes by entering the converging page and selecting '1'.
7. Confirm the accuracy of the Green Geometry.

8.10.6 *Red and blue convergence*

1. Remove the Screen Template.
2. Enter the Converging page with the Remote Transmitter.
   Note: Video Information must be present to correctly adjust the convergence. This can be checked by the presence of audio on the channel selected. Enter the Selection page.
3. Enter the "Red to Green Convergence" by selecting the number "2" on the Selection page with the Remote Transmitter.
4. Cover the Blue Output Lens with a 7" X 7" piece of cardboard.
5. The Red icon should be positioned at the center of the screen move the icon to the left side of the screen and on the middle row of convergence points. If the Red icon is not visible hold the right cursor key of the Remote Transmitter until the icon is visible on the screen. Use the number keys 2,4,6, and 8 to position the icon on the screen at the next point in the convergence sequence. Use the cursor keys to position the Red icon approximately **Half Way Towards The Green Icon**. Continue through the whole Red to Green convergence sequence by moving the Red icons **Only Half Way** towards the green icons. Upon reaching the last position at the lower right of the screen, return to the selection page.
6. Re-select the number "2" on the Remote Transmitter to repeat "Red to Green Convergence". Convergence. Follow the Red to Green Convergence Sequence through a second pass, this time accurately aligning the Red Icon to the Green. Repeat Red to Green Convergence Sequence as required to accurately align the red to Green Convergence. When completed Exit/Save the changes by entering the converging page and selecting '1'.
7. Enter the Converging page with the Remote Transmitter.
   Note: Video Information must be present to correctly adjust the convergence. This can be checked by the presence of audio on the channel selected. Enter the Selection page.
8. Enter the "Blue to Green Convergence" by selecting the number "3" on the Selection page with the Remote Transmitter.
9. Remove the 7" X 7" piece of cardboard from the Blue Output Lens and cover the Red Lens.
10. Repeat the procedure in steps 5 and 6 by adjusting the Blue icons to the Green.
11. **When Convergence Alignment is complete, save the data by selecting "1" from the Convergence Service Menu.**
12. Remove the 7" X 7" piece of cardboard from the Blue Output Lens.

8.10.7 *Horizontal phase*

1. Set the user Brightness to maximum.
2. Enter the 'Normal Geometry Menu'.
3. Select the Horizontal Width Register and note the present value. Reduce the Horizontal Width by approximately 1 1/2 to 2 inches.
4. Tune the set to an active off air or cable channel.
   Note: It is recommended that a signal source other than a generator be used to do this alignment.
   Use an RF signal source such as a broadcast channel.
5. Select the Horizontal Phase register.
6. Using a 7" X 7" piece of cardboard cover the Red and Blue CRT Output Lenses.
7. Adjust the Horizontal Phase to center the picture information onto the reduced raster. This centering can easily be accomplished by observing the left and right edge of the reduced raster.
8. Select register the Horizontal phase register and set the value as previously noted in step 3 of this procedure.
9. Reset user brightness to original level.
10. Remove the 7" X 7" pieces of cardboard.

8.11 The dealer service tool (DST)

Together with the GFL chassis a dealer remote control is introduced, the RC7150 which is called the Dealer Service Tool or DST.
The RC7150 is a remote control for the dealer and the servicer.

8.11.1 Installation features for the dealer

The dealer can use this remote control for programming the TV-set with presets, TV-settings, Dish settings and Logo's. Not only the GFL sets can be programmed with it, but also a lot of existing sets like FL, GR2, G90B, G110 and the new Philips VCR series using the so called NORA deck.

One of the innovative features of the Dealer Service Tool is the way in which it is programmed. A complete list of presets can simply be downloaded from the GFL into the Dealer Service Tool.
To make this download possible, a two way communication link, the so called "dealer link", is set up between the RC7150 and the GFL TV-set.
To establish this link, the GFL sets are equipped with an additional Infra-red transmitter LED and the RC7150 has an Infra Red receiver on board.
The Dealer Link however only works on short distance, up to 10 cm or 4 inches.

For explanation of the installation features of the DST, the directions for use are recommended.

8.11.2 Diagnose features for the servicer

Entering the service modes
The GFL sets can be put in the service alignment mode and the service default mode by connecting two pins on the SSP. With the RC7150 this can also be done:

- Press the "ALIGN" key to enter the Service Alignment Mode.
- Enter the password '3-1-4-0' and press OK.
- Press the "DEFAULT" key, to enter the Service Default Mode.
- In the service default mode the set is put in a default stage regarding tuning frequency, picture settings etceteras.
- Press the "DEALER" key, to enter the Dealer Mode. In the dealer mode some settings can be changed in order to customize the set.

The Service Default Mode can be switched off by switching the set off.

Reading error codes from the error buffer
(See table 8.2)

If an error has been detected by the GFL chassis, protection mode might be activated or the set is put back into stand-by. Without the presence of a picture the errors can be read by the DST, as long as the microprocessor is still active (a LED must light up).

To transmit the errors to the DST:

1. Press the "DIAGNOSE" key.
2. Press "1" to view the last error detected.
3. Hold the DST 5 to 10 cm from in front of the stand-by LED of the set (the IR-sending LED of GFL is located near the stand-by LED).
4. Press the "OK" key.

The error is represented by a 3 digit number.
The 3 digits on the DST are displayed sequentially, with a pause before it is repeated. The digit after the pause is the 1st digit.
If the display reads 2 - 4 - 7, the error code is 247.
To read other error codes, press "DIAGNOSE" and one of the other digit keys.
If the DST cannot communicate to the GFL in a proper way, ERROR 2 is shown in the display. Trying again by changing the DST position a little bit might often help.
If the error buffer of GFL is empty, no errors are displayed by the DST; the display remains blank.

Error number	Description of error
0	No error
1	I^2C, IC7212, SSP [S8] (ST24C02AB1) (not used)
2	I^2C, IC7212, SSP [S8] (ST24C04B1) (not used)
3	I^2C, IC7212, SSP [S8] (ST24C08B1) (not used)
4	I^2C, IC7212, SSP [S8] (ST24C16B1)
5	I^2C, IC7204, SSP [S8] (HEF4094)
6	I^2C, front-end, SSP [S1] (FQ9xx)
7	HEF STROBE, front-end, SSP [S1] (FQ9xx) (not used)
8	I^2C, IC7823, I/O [I] (TEA6425)
9	I^2C, IC7824, I/O [I] (TEA6425)
10	I^2C, IC7821, I/O [I] (TEA6430)
11	I^2C, IC7822, I/O [I] (TEA6430)
12	I^2C, IC7818, I/O [I] (MSM6307)
13	I^2C, IC7814, I/O [I] (TMP47C103N)
14	I^2C, IC7880, I/O [I] (TEA6422)
15	I^2C, IC7352, SSP [S5] (TDA9141/9161)
16	I^2C, IC7500, SSP [S6] (TDA4780)
17	not used
18	I^2C, IC7315, DDP (Geometry) [J] (TDA9155)
19	I^2C, IC7600, SSP [S2] (TDA9840)
20	I^2C, IC7550, NICAM [G] (SAA7282)
21	I^2C, IC7650, SSP [S3] (TDA9860)
22	I^2C, IC7820, AFU [Z] (TDA9860)
23	I^2C, IC7840, AFU [Z] (TEA6360)
24	not used
26	I^2C, IC7746, AFU [Z] (PCF8574)
27	I^2C, IC7601, I/O [U] (PCF8574)
28	I^2C, IC7051, TXT [S or AQ] (SAA5270)
29	I^2C, IC7505, FBX [F] (PCF83C652)
30	PCF8574 (16:9 compressor)
31	TDA8443A (16:9 compressor)
32	I^2C, IC7788, PIP [P] (SDA9288)
33	I^2C, IC7788, PIP [P] (SDA9288)
34	I^2C, PIP tuner [P]
35	not used
36	I^2C, IC7860 PIP [P] (PCF8574)
40	I^2C, PCF83CE652 (card reader)
41	I^2C, PCF83CE654 (satellite)
42	I^2C, IC7900, I/O [I] (PCF8574P)
43	I^2C, IC , [G] (PCF8574)
44	supply protection error (front-end, IC7051 teletext, IC7505 feature box, PIP tuner and IC7821 I/O)
45	not used
46	not used
47	+140V series switch protection
48	protection (prot-line)
49	I^2C, IC7823, I/O [I] (TEA6417)
50	I^2C, IC7788, PIP [P] (SDA9288)
60	BSCS microprocessor (satellite)
61	PCF8574 (3D comb filter)
62	PCF8574 (NTSC to Muse)
65	PCF8574 (HDI)
66	TDA4672 (PSI)
67	TDA8444 (Video Improvement Panel)
68	I^2C, AI without FBX, (TDA9170)
69	hfail, horizontal deflection error (DDP protection)
70	vfail, vertical deflection error (DDP protection)
71	over current (DDP protection)
72	over voltage (DDP protection) (not used)

Table 8.2

12. Spare parts list / Stükliste / Liste des pièces

Large Signal Panel

Various

	4835 219 77732	Large Signal Panel
F401▲	4835 253 97166	Fuse 5A
F408▲	4835 253 37021	Fuse Pico 5A
F409▲	4835 253 37021	Fuse Pico 5A
J401	4822 267 10688	4P Yellow
J402	4822 267 10689	7P Yellow
J403	4822 267 10536	7P
J408	4822 267 10691	1P
J462	4835 265 97017	Contact Pins
J468	4822 267 10692	9P Green
J469	4822 267 10693	4P
J500	4822 267 10691	1P
J501	4822 267 10691	1P
J502	4822 267 10691	1P
J511	4822 267 10691	1P
J540	4822 267 10691	1P
J601	4822 267 10536	7P

⊣⊢

C402	4835 122 47461	680pF 10% 1kV
C403▲	4835 121 47414	2700pF 10% 250V
C407▲	4835 121 47635	2200pF 5% 1kV
C408	4835 122 47648	330pF 10% 500V
C409▲	4835 124 47559	3300µF 35V
C410▲	4822 121 41608	0.1µF 10% 100V
C411	4822 121 42059	0.1µF 400V
C412	4835 122 47648	330pF 10% 500V
C413	4835 122 47648	330pF 10% 500V
C414	4835 124 47632	330µF 25V
C415	4835 122 87025	100pF 5% 50V
C416	4835 121 47087	4700pF 2.5% 63V
C417	4835 122 87524	2200pF 10% 50V
C418	4835 122 47004	1000pF 50V
C419	4835 122 87041	1000pF 10% 50V
C420	4835 122 87025	100pF 5% 50V
C421	4835 122 87044	0.1µF 50V 20%
C422	4835 124 47708	47µF 25V
C423▲	4835 124 47717	470µF 400V
C424▲	4835 124 47717	470µF 400V
C425	4822 121 42059	0.1µF 400V
C426	4835 122 47648	330pF 10% 500V
C427	4835 124 47672	3300µF 25V
C428	4822 121 41608	0.1µF 10% 100V
C429	4835 122 47459	470pF 10% 1kV
C430▲	4835 124 47725	22µF 400V
C434	4835 122 47373	1000pF 10% 1kV
C435	4835 124 47575	3300µF 25V
C436	4822 121 41608	0.1µF 10% 100V
C437	4835 122 87025	100pF 5% 50V
C438	4835 122 47373	1000pF 10% 1kV
C439	4822 121 41608	0.1µF 10% 100V
C440	4835 122 47458	220pF 1kV 10%
C441	4835 124 47579	6800µF 16V
C442	4835 124 47097	470µF 200V
C443	4835 121 47278	0.1µF 250V
C444	4835 122 47373	1000pF 10% 1kV
C445	4835 122 47373	1000pF 10% 1kV
C447	4822 121 41608	0.1µF 10% 100V
C449	4835 122 97067	0.1µF 10% 250V
C450▲	4835 122 97068	0.68µF 10% 250V
C451	4835 121 47634	0.47µF 400V
C452	4835 124 47568	1.5µF 50V
C453	4835 122 87042	.01µF 10% 50V
C454	4835 124 47708	47µF 25V
C455	4835 122 87044	0.1µF 20% 50V
C456	4835 124 47563	100µF 50V
C457	4835 121 47406	1µF 50V
C458	4835 124 47506	4.7µF 50V
C459	4835 124 47574	2200µF 50V
C468	4835 122 87044	0.1µF 20% 50V
C469	4835 122 47648	330pF 10% 500V
C470	4835 122 87044	0.1µF 20% 50V
C471	4835 121 47406	1µF 50V
C472	4835 122 87087	0.22µF 20% 50V
C473	4835 122 47373	1000pF 10% 1kV
C474	4835 124 47574	2200µF 50V
C475	4822 121 41608	0.1µF 10% 100V
C476▲	4835 121 47203	0.015µF 400V
C477	4835 121 47203	0.01µF 400V
C478	4835 124 47573	1000µF 50V
C479	4835 124 47573	1000µF 50V
C480	4822 121 41608	0.1µF 10% 100V
C481	4835 124 47501	100µF 25V
C482	4835 122 87375	0.1µF 50V
C483	4835 124 47501	100µF 25V
C498	4835 124 97175	1µF 35V
C499	4835 122 87044	0.1µF 20% 50V
C501	4835 121 47364	0.47µF 5% 100V
C503	4835 122 87037	680pF 5% 50V
C511	4822 121 42094	0.1µF 10% 50V
C555	4835 124 47551	1000µF 35V
C557	4835 124 47563	100µF 50V
C558	4835 122 47074	150pF 10% 500V
C559	4835 121 47042	.068µF 10% 100V
C560	4835 124 47502	2.2µF 50V
C561	4835 124 47559	3300µF 35V
C564	4835 121 47005	.047µF 10% 100V
C565	4835 122 87083	2200pF 10% 50V
C567	4835 122 87064	.022µF 10% 50V
C569	4835 122 87375	0.1µF 50V
C570	4835 122 87375	0.1µF 50V
C571	4835 122 87375	0.1µF 50V
C572	4835 124 47563	100µF 50V
C573	4835 122 87524	2200pF 10% 50V
C580	4835 122 87025	100pF 5% 50V
C584	4822 121 42008	0.47µF 63V
C585	4835 121 47516	3.3µF 5% 50V
C586	0025 084 52239	.022µF 10% 100V
C587	4835 122 87019	680pF 5% 50V
C588	4835 122 87042	0.01µF 10% 50V
C800	4835 121 47406	1µF 50V
C801	4835 122 87375	0.1µF 50V
C805	4835 121 47629	0.1µF 250V
C806	4835 122 47384	1000pF 500V
C807	4835 122 87375	0.1µF 50V
C808	4835 122 47035	680pF 10% 500V
C809	4835 121 47278	0.1µF 250V
C810	4835 124 47483	470µF 160V
C811▲	4835 122 47058	330pF 20% 2kV
C814	4835 124 47482	47µF 315V
C815	4835 122 47384	1000pF 500V
C817	4835 121 47055	.011µF 5% 1500V
C818	4835 122 47212	560pF 10% 500V
C819▲	4835 121 47638	.039µF 630V
C820	4835 121 47633	4.7µF 100V
C822	4835 121 47607	0.430µF 250V
C824	4835 122 47384	1000pF 500V
C826	4835 124 47563	100µF 50V
C900	4835 124 47494	220µF 16V
C901	4835 122 87447	3300pF 5% 50V
C902	4835 122 87369	1000pF 5% 50V
C903	4835 121 47406	1µF 50V
C904	4835 122 87042	.01µF 10% 50V
C905	4835 122 87044	0.1µF 50V 20%
C906	4835 122 87042	.01µF 10% 50V
C907	4835 122 87063	.015µF 10% 50V
C908	4835 122 47455	15pF 10% 500V
C909	4835 122 47648	330pF 10% 500V
C909	4835 122 47057	2200pF 10% 500V
C910	4835 121 47081	.047µF 10% 100V
C911	4835 124 47506	4.7µF 50V
C913	4835 124 47699	1000µF 16V
C914	4835 124 47483	470µF 160V
C915	4835 121 47637	6800pF 1.6kV
C916	4835 122 47094	6800pF 5% 100V
C917	4835 121 47278	0.1µF 250V
C918	4835 124 47502	2.2µF 50V
C919	4835 121 47425	0.12µF 100V
C920	4835 124 47506	4.7µF 50V
C921	4835 124 47501	100µF 25V
C922	4835 121 47405	470µF 25V
C923	4835 122 87041	1000pF 10% 50V
C924▲	4835 122 57004	820pF 10% 2kV
C927	4835 121 47406	1µF 50V
C928	4835 124 47525	0.33µF 50V
C929	4835 122 47648	330pF 10% 500V
C930	4835 124 47485	1µF 100V
C931	4835 121 47364	0.47µF 5% 100V
C932	4835 122 87061	0.1µF 10% 50V
C933	4835 122 47033	330pF 10% 500V
C2804	4835 124 47563	100µF 50V
C2805	4835 124 47499	10µF 50V
C2836	4835 122 47373	1000pF 10% 1kV
C2837	4835 124 47499	10µF 50V
C2838	4835 122 47373	1000pF 10% 1kV
C2839	4835 122 57002	.01µF 20% 2kV

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R400	4835 116 67262	0Ω2 5% 2W
R401	4822 053 11154	150k 5% 2W
R402▲	4835 116 57409	2k 5% 0.25W
R404▲	4835 112 37032	100Ω 5% 10W
R405▲	4835 116 57009	4M7 1/2W
R406	4835 110 57174	27Ω 5% 0.25W
R407▲	4835 116 67179	0Ω1 5% 1W
R408▲	4835 116 67121	0Ω12 5% 1W
R409▲	4835 112 47014	10Ω 20W
R412	4835 110 57179	510Ω 5% 0.25W
R413▲	4835 111 37029	2k 5% 0.25W
R414▲	4835 116 57053	0Ω91 5% 0.5W
R415▲	4822 053 11154	150k 5% 2W
R416▲	4835 116 57064	15Ω 5% 0.33W
R417	4835 111 37023	10k 5% 0.25W
R418	4835 111 27064	5k76 1% 0.1W
R419	4835 111 37031	22k 5% 0.25W
R420	4835 116 57404	1k6 5% 0.25W
R421	4835 111 37095	390Ω 5% 0.25W
R422	4835 111 37024	100k 5% 0.25W
R423	4835 111 27063	3k92 1% 0.1W
R424	4835 116 57637	18k2 1% 0.1W
R425	4835 111 37079	2k4 5% 0.25W
R426	4835 116 57687	100k 5% 0.5W
R430	4835 116 67275	2k2 5% 3W
R432	4835 116 47016	3Ω 1% NTC
R438	4835 111 37248	33k 5% 0.1W
R439	4835 111 37216	10k 5% 0.1W
R440	4835 111 37216	10k 5% 0.1W
R441	4835 116 57686	10k 5% 0.5W
R442	4835 111 37247	3k3 5% 0.1W
R443	4835 111 37434	100k 5% 0.1W
R444	4835 116 67267	100k 5% 1W
R445	4835 111 27086	5k1 5% 0.1W
R446	4835 116 57686	10k 5% 0.5W
R447	4835 116 67267	100k 5% 1W
R448	4835 111 37023	10k 5% 0.25W
R449▲	4835 116 57097	10Ω 5% 0.5W
R450	4835 116 57636	11k5 1% 0.1W
R451	4835 111 27065	1k82 1% 0.1W
R452	4835 111 27062	3k32 1% 0.1W
R453	4835 116 57389	102k 1% 0.1W
R454	4835 111 27061	2k67 1% 0.1W
R455	4835 100 17039	470Ω 30% LIN
R456	4835 116 57433	510k 5% 0.25W
R457	4835 116 57684	100Ω 5% 0.5W
R458	4835 116 57713	330Ω 5% 0.5W
R466	4835 116 67121	0Ω12 5% 1W
R469▲	4835 116 57755	1Ω5 5% 0.5W
R469	4835 116 57696	150Ω 5% 0.5W
R475▲	4835 116 67263	15Ω 5% 2W
R475▲	4822 117 12288	1Ω5 5% 2W
R476▲	4835 220 27052	100k 5% 2W
R483	4835 110 57002	10Ω 5% 0.25W
R484▲	4835 116 67154	2k 5% 1W
R485▲	4835 116 67154	2k 5% 1W
R486	4835 110 57018	1k 5% 0.25W
R487	4835 111 37432	100Ω 5% 0.1W
R488	4835 111 37217	1M 5% 0.1W
R500	4835 111 37037	4k7 5% 0.25W
R501	4835 111 37023	10k 5% 0.25W
R503	4835 111 37055	120k 5% 0.25W
R504	4835 116 57398	120k 5% 0.25W
R505	4835 111 37071	220Ω 5% 0.25W
R506	4835 111 37055	120k 5% 0.25W
R507	4835 111 37356	62k 5% 0.25W
R508	4835 111 37498	4k3 2% 0.25W
R510	4835 111 37407	470k 5% 0.1W
R511	4835 111 37445	47k 5% 0.1W
R512	4835 111 37023	10k 5% 0.25W
R513	4835 111 37097	39k 5% 0.25W
R514	4835 111 37023	10k 5% 0.25W
R550	4835 111 37445	47k 5% 0.1W
R554	4822 051 10102	1k 5% 0.1W
R555▲	4835 116 67268	1Ω 5% 1W
R558	4835 116 87002	100Ω 5% 0.33W
R559▲	4835 116 67266	1k 5% 1W
R560▲	4835 116 57603	220Ω 5% 1W
R561	4835 111 37033	27k 5% 0.25W
R562	4835 111 37081	24k 5% 0.25W
R564	4835 113 67002	1Ω 5% 1W
R565	4835 111 37022	1k 5% 0.25W
R570	4835 116 57723	470Ω 5% 0.5W
R571	4835 116 57685	1k 5% 0.5W
R572	4822 051 10102	1k 5% 0.1W
R573▲	4835 116 67016	750Ω 5% 1W
R578	4835 111 37104	470Ω 5% 0.25W
R581	4835 110 47006	2k2 5% 0.5W
R582	4835 116 57509	91k 5% 0.25W
R583	4835 111 37066	18k 5% 0.25W
R585	4835 111 37313	20k 5% 0.1W
R586	4835 111 37216	10k 5% 0.1W
R587	4835 111 37025	12k 5% 0.25W
R588	4835 111 37107	47Ω 5% 0.25W
R589	4835 111 37107	47Ω 5% 0.25W
R800	4835 111 37104	470Ω 5% 0.25W
R801	4835 111 37038	47k 5% 0.25W
R802▲	4835 111 37118	68k 5% 0.25W
R803▲	4835 116 57552	100Ω 5% 0.5W
R805	4835 116 57552	100Ω 5% 0.5W
R806	4835 110 47215	1k 20% 0.5W
R807	4835 111 37085	300Ω 5% 0.25W
R808	4835 110 47083	2k2 5% 0.5W
R809	4835 111 37424	270Ω 5% 0.1W
R810▲	4835 116 67218	1k5 5% 0.5W
R811▲	4835 116 67218	1k5 5% 0.5W
R812	4835 111 37118	68k 5% 0.25W
R813	4835 116 67217	1Ω5 5% 2W
R814▲	4835 116 57366	33Ω 5% 0.5W
R815	4835 116 57112	0Ω27 5% 0.5W
R816▲	4835 116 67006	0Ω56 5% 0.5W
R817	4835 111 37104	470Ω 5% 0.25W
R818▲	4835 116 57117	1Ω 5% 1W
R821	4835 111 57002	560Ω 5% 0.5W
R822	4835 110 47113	270Ω 5% 0.5W
R823	4835 111 37118	68k 5% 0.25W
R824	4835 110 47113	270Ω 5% 0.5W
R825▲	4835 116 57441	1Ω 5% 0.5W
R826	4835 110 47113	270Ω 5% 0.5W
R827	4835 111 37118	68k 5% 0.25W
R828	4835 111 37118	68k 5% 0.25W
R829	4835 116 57699	15Ω 5% 0.5W
R830▲	4835 116 67124	510Ω 5% 1W
R840	4835 116 57764	1M 5% 0.5W
R900▲	4835 116 57355	240Ω 5% 1W
R901	4835 100 17036	10k 30% LIN
R902	4835 111 37081	24k 5% 0.25W
R904	4835 111 37086	3k 5% 0.25W
R905	4835 111 37055	120k 5% 0.25W
R906	4835 111 37026	1k5 5% 0.25W
R907	4835 111 37112	5k6 5% 0.25W
R908	4835 111 37437	1k5 5% 0.1W
R910	4835 111 37023	10k 5% 0.25W
R911	4835 111 37354	30Ω 5% 0.25W
R912	4835 111 37023	10k 5% 0.25W
R913	4835 116 57724	4k7 5% 0.5W
R914	4835 111 37038	47k 5% 0.25W
R915▲	4835 111 37123	820Ω 5% 0.25W
R916	4835 111 37022	1k 5% 0.25W
R917	4835 111 37022	1k 5% 0.25W
R918	4835 116 57409	2k 5% 0.25W
R919	4835 111 37092	3k6 5% 0.25W
R920	4835 111 37022	1k 5% 0.25W
R921	4835 111 37066	18k 5% 0.25W
R922	4835 111 37026	1k5 5% 0.25W
R923	4835 116 57698	15K 5% 0.5W
R924	4835 111 37036	360Ω 5% 0.25W
R926	4835 111 37021	100Ω 5% 0.25W
R927	4835 111 37023	10k 5% 0.25W
R928	4835 111 37372	2k2 2% 0.1W
R930	4835 110 47173	10k 5% 0.5W
R931	4835 111 37047	1M 5% 0.25W
R932	4835 111 37376	5.6k 5% 0.1W
R933	4835 111 37047	1M 5% 0.25W
R934▲	4835 116 57114	0.33 Ω 5% 0.5W
R937	4835 116 67253	33k 5% 1W
R938	4835 112 37033	30Ω 10W
R939	4835 116 57597	8060Ω 1% 0.1W
R940▲	4835 116 57652	13k 1% 0.5W
R941	4835 110 47193	110k 5% 0.5W
R942	4835 111 37266	510k 5% 0.1W
R943	4835 100 17047	2k2 30% LIN
R944▲	4835 110 67204	240Ω 2% 0.1W
R945	4835 111 37119	680k 5% 0.25W
R946	4835 110 57321	33k 2% 0.25W
R947	4835 111 37123	820Ω 5% 0.25W
R948	4822 051 10102	1k 5% 0.1W
R949	4835 111 37114	620Ω 5% 0.25W
R951	4835 116 57686	10k 5% 0.5W
R952▲	4835 111 37132	10Ω 5% 0.25W
R954	4835 111 37097	39k 5% 0.25W
R955	4835 110 47172	33k 5% 0.5W
R956	4835 116 57684	100Ω 5% 0.5W
R957	4835 111 37026	1k5 5% 0.25W
R958▲	4835 110 57065	39Ω 5% 2W
R959	4835 110 47215	1k 20%0.5W
R960	4835 116 57552	100Ω 5% 0.5W
R961▲	4835 116 57774	68Ω 5% 0.5W
R961▲	4835 116 57751	68Ω 55 0.33W
R964	4835 110 47164	10Ω 20% 0.5W
R965	4835 111 37047	1M 5% 0.25W
R967	4835 111 37104	470Ω 5% 0.25W
R968	4835 111 37069	20k 5% 0.25W
R969	4835 111 37445	47k 5% 0.1W
R970	4835 111 37216	10k 5% 0.1W
R971	4835 111 37434	100k 5% 0.1W
R975	4835 116 57552	100Ω 5% 0.5W
R980▲	4835 116 67272	4k7 5% 10W
R2810	4835 111 37051	1k1 5% 0.25W
R2812	4835 111 37052	110k 5% 0.25W
R2834▲	4835 116 57112	0Ω27 5% 0.5W
R2835	4835 116 57757	3k 5% 0.5W
R2836▲	4835 116 57709	270Ω 5% 0.5W
R2837	4835 111 37025	12k 5% 0.25W
R2838	4835 111 37079	2k4 5% 0.25W
R2839▲	4835 116 57551	300k 5% 5W
SA401	4835 116 67162	Res. Surge Absorber

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FB910	4835 526 17002	Ferrite Bead
L401	4835 157 57051	2.2µH 10%
L405	4835 157 57051	2.2µH 10%
L407	4835 526 17001	Ferrite Bead
L408	4835 152 27002	10µH
L410	4835 150 57051	18µH
L412	4835 526 17001	Ferrite Bead
L415	4835 152 27029	1.8µH
L416	4835 526 17001	Ferrite Bead
L420	4835 526 17001	Ferrite Bead
L421▲	4835 152 27028	Line Input Choke
L422	4835 152 27002	10µH
L423	4835 152 27002	10µH
L424	4835 152 27002	10µH
L425	4835 152 27002	10µH
L426	4835 157 57063	42µH
L427	4835 526 17001	Ferrite Bead
L428	4835 157 57063	42µH
L429	4835 526 17001	Ferrite Bead
L430	4835 526 17001	Ferrite Bead
L432	4835 152 27002	10µH
L433	4835 526 17001	Ferrite Bead
L435	4835 152 27002	10µH
L440	4835 152 27002	10µH
L550	4835 152 27002	10µH
L803	4835 152 27063	Line Input Choke
L804	4835 150 57086	Line Coil Filter
L805	4835 526 17003	Ferrite Bead
L902	4835 150 57052	22µH 10%
L903	4835 152 27001	3.6µH
L905	4835 152 27038	5.7µH
T401▲	4835 148 87368	Transf. BCK50
T402▲	4835 148 87367	Transf. W02251
T800	4835 142 47021	Horz. Driver
T801▲	4835 148 87318	Transf. SCAN
T802	4835 142 47025	Dynamic Focus
T900	4835 140 67179	L.O.T.
T901	4835 142 47022	Horz. Driver

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D402	4835 130 37052	BYV95C
D403	4835 130 37674	MUR120
D404	4835 130 37052	BYV95C
D405	4835 130 37933	BAX18
D406	4835 130 37931	GBU6J
D407	4835 130 37674	MUR120
D409	4835 130 37905	BAS216
D417	4835 130 37932	FR460
D418	4835 130 37488	MUR460
D419	4835 130 37114	Diode, Silicon
D420	4835 130 37933	BAX18
D431	4835 130 37933	BAX18
D432	4835 130 37934	1N4150
D433	4835 130 37663	MUR820
D434	4835 130 37663	MUR820
D436	4835 130 37905	BAS216
D501	4835 130 37905	BAS216
D502	4835 130 37905	BAS216
D503	4835 130 37905	BAS216
D504	4835 130 37497	BYD77D
D505	4835 130 37905	BAS216
D550	4835 130 37052	BYV95C
D551	4835 130 37905	BAS216
D571	4835 130 37905	BAS216
D801	4835 130 37094	BYD33J
D802	4835 130 37052	BYV95C
D806	4835 130 37166	BY228
D808	4835 130 37059	BYW95C
D900▲	4835 130 37905	BAS216
D901	4835 130 37048	1N4148
D902	4835 130 37938	BY328
D904	4835 130 37933	BAX18
D905	4835 130 37094	BYD33J
D906	4835 130 37102	MUR140
D907	4835 130 37102	MUR140
D908	4835 130 37052	BYV95C
D909	4835 130 37937	BAV103
D910	4835 130 37059	BYW95C
D911	4835 130 37905	BAS216
D2830	4835 130 37012	BYD33M
Z400	4835 130 37935	BZX79-B10
Z500	4835 130 37739	MMSZ5240B
Z501	4835 130 37936	BZX79-B18
Z503	4835 130 37547	P6KE62A
Z901	4835 130 37751	MMSZ5234B

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IC400	4835 310 57001	LM393N
IC400	4822 209 80797	LM393N
IC401	4835 209 87834	SC78110P
IC402	4835 209 87712	SC78104
IC403	4835 209 88555	CNX83A/OF4832
IC405▲	4835 209 88561	CNW136.300
IC406▲	4835 209 88555	CNX83A/OF4832
IC408	4835 209 87486	MC7805CT
IC550	4835 209 17162	TDA3654Q/N3
	4835 325 27017	Insulator f/IC550
IC551	4835 209 88565	TA8859CP
IC551	4835 209 88332	TA8859P
IC552	4835 209 88554	MC7812CT
IC900	4835 209 88553	MC1391P
IC901	4835 209 47065	TL431BCLP
IC901	4835 209 88011	TL431ACLP
IC902	4835 209 87838	SC78130P1
Q401	4835 130 48122	APT6
	4835 256 97316	Spring f/Q401
	4835 325 27002	Insulator f/Q401
Q402	4835 220 27115	MTD1N80E1
Q404	5322 130 60508	BC857B
Q500	5322 130 60508	BC857B
Q501	5322 130 60508	BC857B
Q502	4822 130 60511	BC847B
Q503	4822 130 60511	BC847B
Q550	5322 130 44523	Tip42C
	4835 255 47003	Insulator f/Q550
Q551	4822 130 60511	BC847B
Q800	4822 130 60511	BC847B
Q801	4835 130 47073	2SC2482
Q802	4835 130 48074	2SD2539
	4835 256 97316	Spring f/Q802
	4835 325 27017	Insulator f/Q802
Q803	4835 130 47065	MMST2907
Q900	4822 130 60511	BC847B
Q901	5322 130 60508	BC857B
Q902	4822 130 11086	SPS9397-1
Q902	4835 130 47091	2SC2383
Q903	5322 130 60508	BC857B
Q904	5322 130 60508	BC857B
Q906	4835 130 48074	2SD2539
	4835 256 97316	Spring f/Q906
	4835 325 27017	Insulator f/Q906
Q907	4835 130 47889	MMBTA06LT1
Q908	4835 130 47891	MMBTA56LT1
Q2830	4835 130 47893	2SC3675

25W amplifier panel

Various

	4835 219 57634	25W ampl. panel
J251A	4822 267 10542	4P
J254A	0018 222 20405	5P
J278	4822 267 10537	4P
J469	0018 222 20304	4P
BKS301	0073 466 70001	Stabilizer Bracket
BKT301	0073 514 10005	Bracket, 10W Amp
F401	4835 220 17012	Fuse 3A

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C201	4835 121 47406	1µF 50V
C202	4835 122 47616	0.01µF 50V
C203	4835 122 47616	0.01µF 50V
C208	4835 124 47709	0.22µF 20% 50V
C301	4835 122 47644	100pF 10% 50V
C302	4835 122 47644	100pF 10% 50V
C303	4835 121 47602	0.1µF 63V
C304	4835 121 47602	0.1µF 63V
C305	4835 124 47563	100µF 50V
C306	4835 124 47708	47µF 25V
C307	4835 124 47708	47µF 25V
C308	4835 124 47708	47µF 25V
C309	4835 124 47498	1000µF 35V
C310	4835 124 47498	1000µF 35V
C311	4835 124 47708	47µF 25V
C312	4835 124 47708	47µF 25V
C313	4835 121 47602	0.1µF 63V
C314	4835 121 47602	0.1µF 63V
C401	4835 122 47373	1000pF 1kV
C402▲	4835 124 47711	220µF 400V
C403	4835 122 47459	470pF 1kV
C404	4835 124 47499	10µF 50V
C405	4835 122 47004	1000pF 50V
C406	4835 122 47616	0.01µF 50V
C407	4835 121 47085	4700pF 2.5% 63V
C408	4835 122 47004	1000pF 50V
C409	4835 122 47644	100pF 10% 500V
C410	4835 124 47706	100µF 16V
C411	4835 124 47582	3300µF 50V
C412	4835 121 47602	0.1µF 63V
C413	4835 122 47373	1000pF 1kV
C414	4835 124 47578	680µF 16V
C415	4835 124 47499	10µF 50V
C416	4835 121 47602	0.1µF 63V
C417	4835 122 47373	1000pF 10% 1kV
C418	4835 121 47602	0.1µF 63V
C423	4835 124 47708	47µF 25V
C425	4835 122 47644	100pF 10% 50V

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R201	4835 116 57725	47k 5% 0.5W
R202	4835 116 57725	47k 5% 0.5W
R203	4835 116 57706	22k 5% 0.5W
R204	4835 116 57706	22k 5% 0.5W
R205	4835 116 57018	220k 5% 0.5W
R208	4835 116 57725	47k 5% 0.5W
R260	4835 116 57706	22k 5% 0.5W
R261	4835 116 57706	22k 5% 0.5W
R301	4835 116 57685	1k 5% 0.5W
R302	4835 116 57685	1k 5% 0.5W
R303	4835 116 57687	100k 5% 0.5W
R304	4835 116 57687	100k 5% 0.5W
R305	4835 116 57684	100Ω 5% 0.5W
R306	4835 116 57756	270k 5% 0.5W
R307	4835 116 57687	100k 5% 0.5W
R309	4835 116 57692	12k 5% 0.5W
R310	4835 116 57692	12k 5% 0.5W
R402	4835 116 67264	100k 5% 2W
R403	4835 116 67265	470Ω 5% 3W
R404	4835 116 57752	20k 1% 0.6W
R405	4835 116 57754	4k75 1% 0.6W
R406	4835 116 57018	220k 5% 0.5W
R407	4835 116 57686	10k 5% 0.5W
R408	4835 116 57687	100k 5% 0.5W
R409	4835 116 57686	10k 5% 0.5W
R410	4835 116 57753	3k01 1% 0.6W
R411	4835 116 57684	100Ω 5% 0.5W
R412	4835 116 67265	470Ω 5% 3W
R413	4835 116 57703	2k 5% 0.5W
R414	4835 116 57723	470Ω 5% 0.5W
R415	4835 116 57052	0Ω68 5% 0.5W
R416	4835 116 57719	390Ω 5% 0.5W
R418	4835 116 57723	470Ω 5% 0.5W
R419	4835 116 57711	2k7 5% 0.5W
R420	4835 116 67268	1Ω 5% 1W
R421	4835 110 47023	4Ω7 5% 0.5W

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L401	4835 157 67084	100µH
L402	4835 157 67084	100µH
L403	4835 157 67084	100µH
L404	4835 152 27002	10µH
L405	4835 157 67084	100µH
L407	4835 157 67084	100µH
L409	4835 157 67084	100µH
L410	4835 157 67084	100µH
T401	4835 148 87369	Transf. W02242

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D202	4835 130 37048	1N4148
D203	4835 130 37048	1N4148
D401	4822 130 30842	BAV21
D402	4835 130 37491	MUR860
D404	4835 130 37674	MUR120
D405	4835 130 37052	BYV95C
D406	4835 130 37052	BYV95C
D407	4835 130 37934	1N4150

⊗ ▭

Q202	4835 130 47055	BC547B
Q203	4835 130 48123	J175
Q204	4835 130 48123	J175
Q207	4835 130 48123	J175
Q208	4835 130 48123	J175
Q401	4835 130 47055	BC547B
Q402	4835 130 47055	BC547B
Q403	4835 220 27116	MTW7N80E
IC301	4835 209 87082	STK4392
IC401	4835 209 17027	UC3845N

Picture tube panel green

Various

	4835 219 77716	Green CRT panel
J654A	4822 267 10657	10P
J658A	4822 267 10541	10P
P801	4822 255 10385	CRT socket

⊣⊢

C801	4822 124 12053	0.1µF 10% 400V
C805	4835 122 57005	1000pF 20% 2kV
C807	4822 124 12053	0.1µF 10% 400V
C817	4835 124 27011	10µF 315V
C820	4835 124 47499	10µF 50V
C821	4835 121 47602	1µF 63V
C822	4835 122 47647	560pF 10% 500V
C850	4835 122 47656	220pF 5% 50V
C851	4835 121 47558	1200pF 5% 100V
C852	4835 122 57001	1000pF 20% 1kV

▭

R801	4835 116 57112	0Ω27 5% 0.5W
R803	4835 110 57247	100Ω 5% 0.25W
R810	4835 110 47194	1k5 5% 0.5W
R816	4835 110 47096	110Ω 5% 0.5W
R818	4835 110 47167	22k 20% 0.5W
R819	4835 116 57595	5Ω6 5% 0.5W
R820	4835 116 57595	5Ω6 5% 0.5W
R825	4835 116 57018	1k 5% 0.25W
R826	4835 116 57687	100k 5% 0.5W
R830	4835 116 67273	3k3 5% 3W
R831	4835 116 67273	3k3 5% 3W
R833	4835 116 57772	10M 5% 0.25W
R835	4835 110 57247	100Ω 5% 0.25W
R837	4835 110 57349	2k7 5% 0.25w
R838	4835 110 57068	100k 5% 0.25W
R840	4835 110 57018	1k 5% 0.25W
R842	4835 116 57767	750Ω 1% 0.6W
R843	4835 116 57765	220Ω 1% 0.6W
R845	4835 110 47202	75Ω 2% 0.5W
R850	4835 110 57247	100Ω 5% 0.25W
R851	4835 116 57766	15Ω 1% 0.6W
R852	4835 110 57317	22k 5% 0.25W
R853	4835 110 47195	43Ω 2% 0.5W
R855	4835 110 57019	47Ω 5% 0.25W
R856	4835 110 57248	68Ω 5% 0.25W
R857	4835 116 57686	10k 5% 0.5W
SA801	4835 253 37024	Surge suppressor 500V

〰

L801	4835 157 67077	100µH
L802	4835 157 67087	15µH
L803	4835 150 57086	47µH
L804	4835 150 57086	47µH
L805	4835 157 67089	22µH 5%

→|

D801	4835 130 37102	MUR140
D805	4835 130 37102	MUR140
Z802	4835 130 37948	BZX79-B6V2
Z806	4822 130 34441	BZX79-B22

⊗ ▭

Q801	4835 130 47886	2SC3790E
Q802	4835 130 47051	Transistor, NPN
Q803	4835 130 47091	2SC2383
Q805	4835 130 48115	Transistor, NPN

Picture tube panel red

Various

	4822 219 77717	Red CRT panel
J654	4822 267 10657	10P
P701	4822 267 10385	CRT socket

⊣⊢

C701	4822 124 12053	0.1µF 10% 400V
C702	4822 124 12053	0.1µF 10% 400V
C705	4835 122 57005	1000pF 20% 2kV
C717	4835 124 27011	10µF 315V
C720	4835 124 47499	10µF 50V
C721	4835 121 47602	1µF 63V
C722	4835 122 47647	560pF 10% 50V
C750	4835 122 47656	220pF 5% 50V
C751	4835 121 47558	1.2nF 5% 100V
C752	4835 122 57001	1000pF 20% 1kV

▭

R701	4835 116 57112	0Ω27 5% 0.5W
R703	4835 110 57247	100Ω 55 0.25W
R710	4835 110 47001	1k5 10% 0.5w
R716	4835 110 47096	110Ω 5% 0.5W
R718	4835 110 47167	22k 20% 0.5W
R719	4835 116 57595	5Ω6 5% 0.5W
R720	4835 116 57595	5Ω6 5% 0.5W
R730	4835 116 67273	3k3 5% 3W
R731	4835 116 67273	3k3 5% 3W
R733	4835 116 57772	10M 5% 0.25W

R735	4835 110 57247	100Ω 1% 0.6W
R737	4835 110 57349	2k7 5% 0.25W
R738	4835 110 57068	100k 1% 0.6W
R740	4835 110 57018	1k 1% 0.6W
R742	4835 110 57352	750Ω 1% 0.6W
R743	4835 116 57765	220Ω 1% 0.6W
R745	4835 110 47202	75Ω 5% 0.5W
R750	4835 110 57247	100Ω 1% 0.6W
R751	4835 116 57766	15Ω 1% 0.6W
R752	4835 110 57317	22k 5% 0.25W
R753	4835 110 47195	43Ω 5% 0.5W
R755	4835 110 57019	47Ω 1% 0.6W
R756	4835 110 57248	68Ω 1% 0.6W
SA701	4835 253 37024	Surge suppressor 500V

〰

L701	4835 157 67077	100µH
L702	4835 157 67087	15µH
L703	4835 150 57086	47µH
L704	4835 150 57086	47µH
L705	4835 157 67089	22µH 5%

→⊢

D701	4835 130 37102	MUR140
D705	4835 130 37102	MUR140
D706	4835 130 37102	MUR140
Z702	4835 130 37948	BZX79-B6V2

⊗ ▭

Q701	4835 130 47886	2SC3790E
Q702	4835 130 47051	Transistor, NPN
Q703	4835 130 47091	2SC2383
Q705	4835 130 48115	Transistor, NPN

Picture tube panel blue

Various

	4835 219 77718	Blue CRT panel
J658	4822 267 10541	10P
P901	4822 267 10385	CRT socket

⊣⊢

C901	4822 124 12053	0.1µF 10% 400V
C902	4822 124 12053	0.1µF 10% 400V
C905	4835 122 57005	1000pF 20% 2kV
C917	4835 124 27011	10µF 315V
C920	4835 124 47499	10µF 50V
C921	4835 121 47602	1µF 63V
C922	4835 122 47647	560pF 10% 50V
C950	4835 122 47656	220pF 5% 50V
C951	4835 121 47558	1.2nF 5% 100V
C952	4835 122 57001	1000pF 20% 1kV

▭

R901	4835 116 57112	0Ω27 5% 0.5W
R903	4835 110 57247	100Ω 55 0.25W
R910	4835 110 47001	1k5 10% 0.5w
R916	4835 110 47096	110Ω 5% 0.5W
R918	4835 110 47167	22k 20% 0.5W
R919	4835 116 57595	5Ω6 5% 0.5W
R920	4835 116 57595	5Ω6 5% 0.5W
R930	4835 116 67273	3k3 5% 3W
R931	4835 116 67273	3k3 5% 3W
R933	4835 116 57772	10M 5% 0.25W
R935	4835 110 57247	100Ω 1% 0.6W
R937	4835 110 57349	2k7 5% 0.25W
R938	4835 110 57068	100k 1% 0.6W
R940	4835 110 57018	1k 1% 0.6W
R942	4835 110 57352	750Ω 1% 0.6W
R943	4835 116 57765	220Ω 1% 0.6W
R945	4835 110 47202	75Ω 5% 0.5W
R950	4835 110 57247	100Ω 1% 0.6W
R951	4835 116 57766	15Ω 1% 0.6W
R952	4835 110 57317	22k 5% 0.25W
R953	4835 110 47195	43Ω 5% 0.5W
R955	4835 110 57019	47Ω 1% 0.6W
R956	4835 110 57248	68Ω 1% 0.6W
SA901	4835 253 37024	Surge suppressor 500V

〰

L901	4835 157 67077	100µH
L902	4835 157 67087	15µH
L903	4835 150 57086	47µH
L904	4835 150 57086	47µH
L905	4835 157 67089	22µH 5%

→⊢

D901	4835 130 37102	MUR140
D905	4835 130 37102	MUR140
D906	4835 130 37102	MUR140
Z902	4835 130 37948	BZX79-B6V2

⊗ ▭

Q901	4835 130 47886	2SC3790E
Q902	4835 130 47051	Transistor, NPN
Q903	4835 130 47091	2SC2383
Q905	4835 130 48115	Transistor, NPN

Customer switch panel

Various

	4835 219 37059	Customer switch panel 48"
	4835 219 37207	Customer switch panel 54"
V33	4822 267 10683	9P
V44	4822 267 10538	3P

⊣⊢

C7	4835 122 47185	330pF 10% 50V
C10	4835 122 47185'	330pF 10% 50V
C14	4835 122 47659	6800pF 10% 50V
C18	4835 122 47659	6800pF 10% 50V

▭

R1	4835 116 57739	75Ω 5% 0.5W
R3	4835 116 57739	75Ω 5% 0.5W
R4	4835 116 57739	75Ω 5% 0.5W
R6	4835 116 57706	22k 5% 0.5W
R7	4835 116 57685	1k 5% 0.5W
R9	4835 116 57706	22k 5% 0.5W
R10	4835 116 57685	1k 5% 0.5W
R12	4822 116 52193	30Ω 5% 0.25W
R13	4822 116 52193	30Ω 5% 0.25W
R14	4835 116 57686	10k 5% 0.5W
R16	4822 116 52193	30Ω 5% 0.25W
R17	4822 116 52193	30Ω 5% 0.25W
R18	4835 116 57686	10k 5% 0.5W

→⊢

Z1	4835 130 37008	BZX79-C6V2
Z2	4835 130 37008	BZX79-C6V2
Z3	4835 130 37008	BZX79-C6V2
Z4	4835 130 37008	BZX79-C6V2
Z6	4835 130 37008	BZX79-C6V2
Z7	4835 130 37008	BZX79-C6V2
Z9	4835 130 37008	BZX79-C6V2
Z10	4835 130 37008	BZX79-C6V2
Z12	4835 130 37008	BZX79-C6V2
Z13	4835 130 37008	BZX79-C6V2
Z16	4835 130 37008	BZX79-C6V2
Z17	4835 130 37008	BZX79-C6V2

Led panel

Various

	4822 212 11554	Led panel
IR300	4835 219 67061	IR Receiver
J302	4822 267 40677	5P
J305	4822 265 31087	3P

→⊢

D301	4822 130 82021	LTL-307G
D302	4822 130 82022	LTL-307P
D303	4835 130 87147	IR led

Dig. convergence panel

Various

	4835 219 77727	Digital convergence panel
J307	2422 025 15025	8P
J401	4822 267 10688	4P yellow
J468	0018 223 80009	9P green
J483	0018 165 80205	HDR 3.96
J484	0018 165 80205	HDR 3.96
J485	0018 165 80205	HDR 3.96
J580	4835 265 97017	Contact pin
J581	4835 265 97017	Contact pin
J582	4835 265 97017	Contact pin
J608	0018 223 60010	10P yellow
TP4	0018 152 70002	2P
HS100	4835 255 47003	Insulator
HS100	4835 290 47008	Spring
F1▲	4835 253 37027	Fuse 4A
F2▲	4835 253 37027	Fuse 4A
F3▲	4835 253 37026	Fuse 1A

⊣⊢

C11	4835 124 47727	1000µF 50V
C13	4835 124 47576	470µF 25V
C14	4835 124 47501	100µF 25V
C15	4835 122 87044	0.1µF 20% 50V
C16	4835 122 87012	100pF 5% 50V
C17	4835 122 87012	100pF 5% 50V
C19	4835 122 87375	0.1µF 50V
C20	4835 121 47232	0.01µF 10% 100V
C21	4835 122 47487	2700pF 10% 100V
C22	4835 122 87376	220pF 5% 50V
C23	4835 122 87376	220pF 5% 50V
C24	4835 122 87412	10pF 5% 50V
C25	4835 122 87375	0.1µF 50V
C29	4835 122 87375	0.1µF 50V
C30	4835 122 87044	0.1µF 20% 50V
C31	4835 122 87381	27pF 5% 50V
C32	4835 122 47185	330pF 10% 50V
C33	4835 124 47502	2.2µF 50V
C34	4835 122 87375	0.1µF 50V
C35	4835 124 47557	220µF 25V
C36	4835 124 47503	22µF 50V
C37	4835 122 87044	0.1µF 20% 50V
C38	4835 124 47583	1000µF 25V
C39	4835 122 87381	27pF 5% 50V
C41	4835 124 47502	2.2µF 50V
C42	4835 122 87375	0.1µF 50V
C50	4835 122 87375	0.1µF 50V
C51	4835 122 87528	100pF 10% 50V
C52	4835 122 87044	0.1µF 20% 50V
C71	4835 122 87528	100pF 10% 50V
C72	4835 122 87528	100pF 10% 50V
C73	4835 122 87077	100pF 10% 50V
C74	4835 122 87381	27pF 5% 50V
C81	4835 124 47727	1000µF 50V
C83	4835 124 47576	470µF 25V
C84	4835 124 47501	100µF 25V
C85	4835 121 47602	1µF 63V
C86	4835 121 47602	1µF 63V
C87	4835 124 47699	1000µF 16V
C88	4835 122 87375	0.1µF 50V
C100	4835 122 47091	2.2nF 5% 100V
C101	4835 122 47651	0.22µF 100V
C106	4835 124 47502	2.2µF 50V
C107	4835 124 47502	2.2µF 50V
C108	4835 124 47502	2.2µF 50V
C109	4835 124 47502	2.2µF 50V
C110	4835 122 87375	0.1µF 50V
C111	4835 122 87375	0.1µF 50V
C112	4835 122 47008	270pF 10% 50V
C127	4835 121 47038	0.22µF 5% 100V
C150	4835 122 47091	2.2nF 5% 100V
C151	4835 122 47651	0.22µF 100V
C152	4835 121 47232	0.01µF 10% 100V
C153	4835 121 47232	0.01µF 10% 100V
C157	4835 124 47502	2.2µF 50V
C158	4835 124 47502	2.2µF 50V
C162	4835 122 47008	270pF 10% 50V
C173	4835 122 87451	470pF 5% 50V
C174	4835 122 87451	470pF 5% 50V
C175	4835 122 87375	0.1µF 50V
C176	4835 122 87375	0.1µF 50V
C177	4835 121 47038	0.22µF 5% 100V
C180	4835 121 47406	1µF 20% 63V
C200	4835 122 47091	2.2nF 5% 100V
C201	4835 122 47651	0.22µF 100V
C206	4835 124 47502	2.2µF 50V
C207	4835 124 47502	2.2µF 50V
C208	4835 124 47502	2.2µF 50V
C209	4835 124 47502	2.2µF 50V
C210	4835 122 87375	0.1µF 50V
C211	4835 122 87375	0.1µF 50V
C212	4835 122 47008	270pF 10% 50V
C227	4835 121 47038	0.22µF 5% 100V
C250	4835 122 47091	2.2nF 5% 100V
C251	4835 122 47651	0.22µF 100V
C252	4835 121 47232	0.01µF 10% 100V
C253	4835 121 47232	0.01µF 10% 100V
C257	4835 124 47502	2.2µF 50V
C258	4835 124 47502	2.2µF 50V
C262	4835 122 47008	270pF 10% 50V
C265	4835 121 47602	1µF 63V
C273	4835 122 87451	470pF 5% 50V
C274	4835 122 87451	470pF 5% 50V
C275	4835 122 87375	0.1µF 50V
C276	4835 122 87375	0.1µF 50V
C277	4835 121 47038	0.22µF 5% 100V
C280	4835 121 47406	1µF 20% 63V
C300	4835 122 47091	2.2nF 5% 100V
C301	4835 122 47651	0.22µF 100V
C306	4835 124 47502	2.2µF 50V
C307	4835 124 47502	2.2µF 50V
C308	4835 124 47502	2.2µF 50V
C309	4835 124 47502	2.2µF 50V
C310	4835 122 87375	0.1µF 50V
C311	4835 122 87375	0.1µF 50V
C312	4835 122 47008	270pF 10% 50V
C327	4835 121 47038	0.22µF 5% 100V
C350	4835 122 47091	2.2nF 5% 100V
C351	4835 122 47651	0.22µF 100V
C352	4835 121 47232	0.01µF 10% 100V
C353	4835 121 47232	0.01µF 10% 100V
C357	4835 124 47502	2.2µF 50V
C358	4835 124 47502	2.2µF 50V
C362	4835 122 47008	270pF 10% 50V
C373	4835 122 87451	470pF 5% 50V
C374	4835 122 87451	470pF 5% 50V
C375	4835 122 87375	0.1µF 50V
C376	4835 122 87375	0.1µF 50V
C377	4835 121 47038	0.22µF 5% 100V
C380	4835 121 47406	1µF 20% 63V

▭

	4835 111 27056	Jumper
R11	4835 116 57723	470Ω 1% 0.6W
R12	4835 111 37234	2k2 5% 0.1W
R13	4835 111 37458	15k 5% 0.1W
R14	4835 111 37247	3k3 5% 0.1W
R18	4835 111 37432	100Ω 5% 0.1W
R19	4835 111 37432	100Ω 5% 0.1W
R20	4835 116 57684	100Ω 5% 0.5W
R21	4835 111 37432	100Ω 5% 0.1W
R22	4835 116 57714	3k3 5% 0.5W
R24	4835 116 57697	1k5 5% 0.5W
R25	4835 111 37248	33k 5% 0.1W
R27	4835 111 27052	100k 5% 2W
R28	4835 111 27076	2k7 1% 0.1W
R29	4835 116 57705	220Ω 1% 0.6W
R30	4835 111 37437	1k5 1% 0.1W
R31	4835 111 37432	100Ω 5% 0.1W
R32	4835 116 57684	100Ω 5% 0.5W
R33	4835 111 27052	100k 5% 2W
R34	4835 111 27052	100k 5% 2W
R35	4822 051 10102	1k 2% 0.25W
R36	4835 116 57684	100Ω 5% 0.5W
R37	4835 111 37216	10k 1% 0.1W
R38	4835 111 37216	10k 1% 0.1W
R47	4835 111 37216	10k 1% 0.1W
R48	4835 116 57723	470Ω 1% 0.6W
R49	4835 110 47006	2k2 5% 0.5W
R54	4835 116 57221	100Ω 5% 3W
R55	4835 116 57697	1k5 5% 0.5W
R56	4835 116 57221	100Ω 5% 3W
R57	4835 116 57697	1k5 5% 0.5W
R78	4835 111 37272	6k8 1% 0.1W
R79	4835 116 57413	2k4 1% 0.6W
R80	4835 116 57686	10k 1% 0.6W
R82	4822 051 10102	1k 2% 0.25W
R83	4835 111 27052	100k 5% 2W
R86	4835 116 57684	100Ω 5% 0.5W
R87	4835 116 57684	100Ω 5% 0.5W
R88	4835 116 57684	100Ω 5% 0.5W
R89	4835 116 57684	100Ω 5% 0.5W
R90	4835 111 37216	10k 1% 0.1W
R91	4835 116 67062	100Ω 5% 1W
R92	4835 111 37216	10k 1% 0.1W
R93	4835 116 57723	470Ω 1% 0.6W
R94	4835 116 57697	1k5 5% 0.5W
R95	4835 116 57697	1k5 5% 0.5W
R98	4835 116 57649	2k94 1% 0.6W
R99	4835 116 57723	470Ω 1% 0.6W
R100	4835 116 57545	1k3 1% 0.6W
R101	4835 111 27076	2k7 1% 0.1W
R102	4835 116 57705	220Ω 1% 0.6W
R103	4835 116 57741	820Ω 5% 0.5W
R104	4835 116 57736	6k8 5%
R105	4835 111 27042	1k2 5% 0.1W
R106	4835 111 37259	470Ω 5% 0.1W
R107	4835 111 37443	330Ω 5% 0.1W
R108	4835 116 57151	2k67 1% 0.6W
R109	4835 116 87002	100Ω 1% 0.4W
R110	4835 110 57187	18k 5% 0.5W

R111	4835 116 57121	5Ω1 5% 0.1W
R112	4835 116 57121	5Ω1 5% 0.1W
R113	4835 116 57731	560Ω 5% 0.5W
R114	4835 116 57164	12Ω 1% 0.6W
R115	4835 116 57164	12Ω 1% 0.6W
R127	4835 116 57097	10Ω 5% 0.5W
R147	4835 116 57649	2k94 1% 0.6W
R148	4835 111 27076	2k7 1% 0.1W
R149	4835 116 57723	470Ω 1% 0.6W
R150	4835 111 37224	1k3 55 0.1W
R152	4835 116 57705	220Ω 1% 0.6W
R153	4835 116 57741	820Ω 5% 0.5W
R154	4835 111 37272	6k8 1% 0.1W
R155	4835 111 27042	1k2 5% 0.1W
R156	4835 111 37259	470Ω 5% 0.1W
R157	4835 111 37443	330Ω 5% 0.1W
R158	4835 116 57151	2k67 1% 0.6W
R159	4835 116 87002	100Ω 1% 0.4W
R160	4835 110 57187	18k 5% 0.5W
R161	4835 116 57121	5Ω1 5% 0.1W
R162	4835 116 57121	5Ω1 5% 0.1W
R163	4835 116 57731	560Ω 5% 0.5W
R177	4835 116 57097	10Ω 5% 0.5W
R179	4835 116 67152	0Ω33 5% 0.5W
R180	4835 116 67152	0Ω33 5% 0.5W
R182	4835 116 67152	0Ω33 5% 0.5W
R183	4835 116 67152	0Ω33 5% 0.5W
R198	4835 116 57649	2k94 1% 0.6W
R199	4835 116 57723	470Ω 1% 0.6W
R200	4835 116 57545	1k3 1% 0.6W
R201	4835 111 27076	2k7 1% 0.1W
R202	4835 116 57705	220Ω 1% 0.6W
R203	4835 116 57741	820Ω 5% 0.5W
R204	4835 116 57736	6k8 5%
R205	4835 111 27042	1k2 5% 0.1W
R206	4835 111 37259	470Ω 5% 0.1W
R207	4835 111 37443	330Ω 5% 0.1W
R208	4835 116 57151	2k67 1% 0.6W
R209	4835 116 87002	100Ω 1% 0.4W
R210	4835 110 57187	18k 5% 0.5W
R211	4835 116 57121	5Ω1 5% 0.1W
R212	4835 116 57121	5Ω1 5% 0.1W
R213	4835 116 57731	560Ω 5% 0.5W
R214	4835 116 57164	12Ω 1% 0.6W
R215	4835 116 57164	12Ω 1% 0.6W
R227	4835 116 57097	10Ω 5% 0.5W
R247	4835 116 57462	3k65 1% 0.6W
R248	4835 111 27076	2k7 1% 0.1W
R249	4835 116 57723	470Ω 1% 0.6W
R250	4835 111 37224	1k3 5% 0.1W
R252	4835 116 57705	220Ω 1% 0.6W
R253	4835 116 57741	820Ω 5% 0.5W
R254	4835 116 57736	6k8 5%
R255	4835 111 27042	1k2 5% 0.1W
R256	4835 111 37259	470Ω 5% 0.1W
R257	4835 111 37443	330Ω 5% 0.1W
R258	4835 116 57151	2k67 1% 0.6W
R259	4835 116 87002	100Ω 1% 0.4W
R260	4835 110 57187	18k 5% 0.5W
R261	4835 116 57121	5Ω1 5% 0.1W
R262	4835 116 57121	5Ω1 5% 0.1W
R263	4835 116 57731	560Ω 5% 0.5W
R277	4835 116 57097	10Ω 5% 0.5W
R279	4835 116 67152	0Ω33 5% 0.5W
R280	4835 116 67152	0Ω33 5% 0.5W
R282	4835 116 67152	0Ω33 5% 0.5W
R283	4835 116 67152	0Ω33 5% 0.5W
R298	4835 116 57649	2k94 1% 0.6W
R299	4835 116 57723	470Ω 1% 0.6W
R300	4835 116 57545	1k3 1% 0.6W
R301	4835 111 27076	2k7 1% 0.1W
R302	4835 116 57705	220Ω 1% 0.6W
R303	4835 116 57741	820Ω 5% 0.5W
R304	4835 116 57736	6k8 5%
R305	4835 111 27042	1k2 5% 0.1W
R306	4835 111 37259	470Ω 5% 0.1W
R307	4835 111 37443	330Ω 5% 0.1W
R308	4835 116 57151	2k67 1% 0.6W
R309	4835 116 87002	100Ω 1% 0.4W
R310	4835 110 57187	18k 5% 0.5W
R311	4835 116 57121	5Ω1 5% 0.1W
R312	4835 116 57121	5Ω1 5% 0.1W
R313	4835 116 57731	560Ω 5% 0.5W
R314	4835 116 57164	12Ω 1% 0.6W
R315	4835 116 57164	12Ω 1% 0.6W
R327	4835 116 57097	10Ω 5% 0.5W
R347	4835 116 57028	2k43 1% 0.6W
R348	4835 111 27076	2k7 1% 0.1W
R349	4835 116 57723	470Ω 1% 0.6W
R350	4835 111 37224	1k3 5% 0.1W
R352	4835 116 57705	220Ω 1% 0.6W
R353	4835 116 57741	820Ω 5% 0.5W
R354	4835 116 57736	6k8 5%
R355	4835 111 27042	1k2 5% 0.1W
R356	4835 111 37259	470Ω 5% 0.1W
R357	4835 111 37443	330Ω 5% 0.1W
R358	4835 116 57151	2k67 1% 0.6W
R359	4835 116 87002	100Ω 1% 0.4W
R360	4835 110 57187	18k 5% 0.5W
R361	4835 116 57121	5Ω1 5% 0.1W
R362	4835 116 57121	5Ω1 5% 0.1W
R363	4835 116 57731	560Ω 5% 0.5W
R377	4835 116 57097	10Ω 5% 0.5W
R379	4835 116 67152	0Ω33 5% 0.5W
R380	4835 116 67152	0Ω33 5% 0.5W
R382	4835 116 67152	0Ω33 5% 0.5W
R383	4835 116 67152	0Ω33 5% 0.5W

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L3	4835 157 58097	5µH Adj.
L4	4835 152 27026	10µH
L5	4835 152 27049	22µH 10%
L6	4835 152 27049	22µH 10%
L11	4835 157 58078	5.6µH 5%
L12	4835 157 58078	5.6µH 5%
L13	4835 157 58078	5.6µH 5%
L16	4835 157 58078	5.6µH 5%
L19	4835 157 58078	5.6µH 5%
L20	4835 157 57103	5.6µH 5%
L22	4835 157 57103	5.6µH 5%
L24	4835 157 57103	5.6µH 5%
L25	4835 157 57434	6.8µH 5%
L26	4835 157 57434	6.8µH 5%
L27	4835 157 57434	6.8µH 5%
L28	4835 157 57434	6.8µH 5%

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D5	4822 130 83757	BAS216
D6	4822 130 83757	BAS216
D7	4822 130 83757	BAS216
D10	4822 130 83757	BAS216
D11	4822 130 83757	BAS216
D12	4822 130 83757	BAS216
D13	4822 130 83757	BAS216
D100	4822 130 30841	1N4150
D111	4822 130 83757	BAS216
D112	4822 130 83757	BAS216
D113	4822 130 83757	BAS216
D114	4822 130 83757	BAS216
D150	4822 130 30841	1N4150
D200	4822 130 30841	1N4150
D211	4822 130 83757	BAS216
D212	4822 130 83757	BAS216
D213	4822 130 83757	BAS216
D214	4822 130 83757	BAS216
D250	4822 130 30841	1N4150
D300	4822 130 30841	1N4150
D311	4822 130 83757	BAS216
D312	4822 130 83757	BAS216
D313	4822 130 83757	BAS216
D314	4822 130 83757	BAS216
D350	4822 130 30841	1N4150
VR1	5322 130 32162	BB909A
Z2	4835 130 37001	BZX79-B12
Z3	4835 130 37014	BZX79-B10
Z5	4835 130 37119	BZX79-B5V1
Z6	4835 220 17061	MMSZ5231B
Z7	4835 220 17061	MMSZ5231B
Z8	4835 220 17061	MMSZ5231B
Z9	4835 220 17061	MMSZ5231B
Z10	4835 130 37941	BZX79-B5V1
Z15	4835 130 37119	BZX79-B5V1
Z30	4835 130 37119	BZX79-B5V1
Z200	4835 130 37942	BZX79-B30
Z201	4835 130 37942	BZX79-B30
Z300	4835 130 37942	BZX79-B30
Z301	4835 130 37942	BZX79-B30

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IC6	4822 209 80817	L7805CV
IC10	5322 209 86234	NE5532N
IC11	4835 900 11169	M22C16FB1 pre-programmed
IC13	4835 209 88475	UPD65654GF
IC100	5322 209 86234	NE5532N
IC165	4835 209 88476	TDA1313/N1
IC200	5322 209 86234	NE5532N
IC265	4835 209 88476	TDA1313/N1
IC300	5322 209 86234	NE5532N
IC365	4835 209 88476	TDA1313/N1
Q5	4835 130 47642	BD1369
Q6	4835 130 47086	MB403
Q8	4835 130 47086	MB403
Q9	4835 130 47086	MB403
Q10	4822 130 44237	BF450
Q11	4835 130 47051	Transistor,NPN
Q15	4822 130 40824	BD140
Q100	4822 130 40959	BC547B
Q101	4822 130 40959	BC547B
Q102	4822 130 40959	BC547B
Q103	4822 130 40959	BC547B
Q104	4822 130 40824	BD140
Q105	4835 130 47642	BD1369
Q106	5322 130 44506	TIP41C
Q107	5322 130 44523	TIP42C
Q150	4822 130 40959	BC547B
Q151	4822 130 40959	BC547B
Q152	4822 130 40959	BC547B
Q153	4822 130 40959	BC547B
Q154	4822 130 40824	BD140
Q155	4835 130 47642	BD1369
Q156	5322 130 44506	TIP41C
Q157	5322 130 44523	TIP42C
Q200	4822 130 40959	BC547B
Q201	4822 130 40959	BC547B
Q202	4822 130 40959	BC547B
Q203	4822 130 40959	BC547B
Q204	4822 130 40824	BD140
Q205	4835 130 47642	BD1369
Q206	5322 130 44506	TIP41C
Q207	5322 130 44523	TIP42C
Q250	4822 130 40959	BC547B
Q251	4822 130 40959	BC547B
Q252	4822 130 40959	BC547B
Q253	4822 130 40959	BC547B
Q254	4822 130 40824	BD140
Q255	4835 130 47642	BD1369
Q256	5322 130 44506	TIP41C
Q257	5322 130 44523	TIP42C
Q300	4822 130 40959	BC547B
Q301	4822 130 40959	BC547B
Q302	4822 130 40959	BC547B
Q303	4822 130 40959	BC547B
Q304	4822 130 40824	BD140
Q305	4835 130 47642	BD1369
Q306	5322 130 44506	TIP41C
Q307	5322 130 44523	TIP42C
Q350	4822 130 40959	BC547B
Q351	4822 130 40959	BC547B
Q352	4822 130 40959	BC547B
Q353	4822 130 40959	BC547B
Q354	4822 130 40824	BD140
Q355	4835 130 47642	BD1369
Q356	5322 130 44506	TIP41C
Q357	5322 130 44523	TIP42C

AC input panel

Various

	4835 219 77747	AC input panel
M1	4822 265 31326	3P
M2A	4835 265 97017	Contact pins
M3A	4835 265 97017	Contact pins
SW401	4822 276 13592	Mains switch
F401	4835 253 97167	Fuse T6.3A

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C402	4835 121 47569	470nF 275V
C403	4835 121 47035	0.033pF 400V

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R403	4835 110 47216	220Ω 20% 0.5W
R404	4835 116 57009	4M7 5% 0.5W
R405	4835 116 57653	2M2 5% 0.5W

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L401	4835 150 57088	Mains filter
L402A	4835 150 57087	Line filter

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Z401	4835 130 37947	BZX79-C27
Z402	4835 130 37947	BZX79-C27

Surround sound panel

Various

BKT703	0073 568 70004	Bracket
J250	0018 222 30405	5 Pin Connector
J705	4835 265 97017	Contact Pins

Scavem panel

Various

	4822 212 11553	Scavem panel
HS76	4835 290 47008	Spring
J751	4822 267 10711	10P
J752	4822 267 10684	2P
J753	4822 267 10684	2P
J754	4822 267 10684	2P

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C751	4835 121 47406	1µF 20% 63V
C752	4835 121 47079	330pF 10% 50V
C753	4835 121 47405	470µF 25V
C754	4822 121 41853	100nF 10% 100V
C755	4835 122 47608	47nF 50V
C756	4835 124 47668	470µF 50V
C757	4822 121 41815	10nF 10% 100V
C758	4835 121 47405	470µF 25V
C759	4835 122 47645	150pF 10% 50V
C760	4835 122 47645	150pF 10% 50V
C761	4835 121 47278	100nF 250V
C762	4822 124 12053	0.01µF 10% 400V
C763	4822 124 12053	0.01µF 10% 400V
C766	4835 124 47713	47µF 160V
C767	4835 124 47713	47µF 160V
C768	4835 124 47713	47µF 160V
C769	4835 124 47726	22µF 160V
C770	4835 122 47647	560pF 10% 500V
C774	4822 121 41815	10nF 10% 100V

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R751	4835 116 57745	22Ω 5% 0.33W
R752	4835 110 57187	18k 5% 0.5W
R753	4835 116 57724	4k7 5% 0.5W
R754	4835 116 57685	1k 1% 0.6W
R755	4835 116 57701	180Ω 5% 0.5W
R756	4835 116 57684	100Ω 5% 0.5W
R758	4835 116 57708	22Ω 5% 0.5W
R760	4835 116 57763	4Ω7 5% 0.33W
R761	4835 116 57731	560Ω 5% 0.5W
R762	4835 116 57709	270Ω 5% 0.5W
R763	4835 116 57684	100Ω 5% 0.5W
R764	4835 110 47006	2k2 5% 0.5W
R765	4835 116 57702	1k8 5% 0.5W
R766	4835 116 57696	150Ω 5% 0.5W
R767	4835 116 57714	3k3 5% 0.5W
R768	4835 116 57724	4k7 5% 0.5W
R769	4835 116 57715	33k 5% 0.5W
R770	4835 116 57723	470Ω 1% 0.6W
R771	4835 116 57715	33k 5% 0.5W
R772	4835 116 57685	1k 1% 0.6W
R773	4835 116 57761	82Ω 55 0.5W
R774	4835 116 57708	22Ω 5% 0.5W
R775	4835 116 57708	22Ω 5% 0.5W
R776	4835 116 57708	22Ω 5% 0.5W
R779	4835 112 27043	330Ω 5% 5W
R782	4835 116 57713	330Ω 5% 0.5W
R783	4835 116 57737	68k 5% 0.5W
R784	4835 116 57686	10k 1% 0.6W
R785	4835 116 57737	68k 5% 0.5W
R786	4835 116 57713	330Ω 5% 0.5W
R787	4835 116 67269	27Ω 5% 1W
R788	4835 116 67269	27Ω 5% 1W
R789	4835 116 67271	3Ω3 5% 1W
R791	4835 116 67271	3Ω3 5% 1W
R792	4835 116 57723	470Ω 1% 0.6W
R793	4835 116 57706	22k 5% 0.5W
R794	4835 116 57708	22Ω 5% 0.5W
R795	4835 116 57708	22Ω 5% 0.5W
R796	4835 116 57127	82Ω 5% 3W
R797	4835 116 57724	4k7 5% 0.5W
R798	4835 116 57127	82Ω 5% 3W
R799	4835 116 57127	82Ω 5% 3W

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FB751	4835 526 17003	Ferrite bead
FB752	4835 526 17003	Ferrite bead
L752	4822 157 71113	10µH 10%

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D751	4835 130 37048	1N4148
D752	4835 130 37048	1N4148
D753	4835 130 37048	1N4148
D760	4835 130 37048	1N4148
D761	4835 220 17059	Diode, Silicon
D762	4835 220 17059	Diode, Silicon

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Q751	4835 130 47055	BC547B
Q753	4835 130 47162	BC558B
Q754	4835 130 47055	BC547B
Q755	4835 130 47055	BC547B
Q756	4835 130 47055	BC547B
Q757	4835 130 48113	BC337-25
Q758	4835 130 48112	BC327-25
Q759	4835 130 48119	2SB940AP
Q760	4835 130 48121	2SD1264AP
Q761	4835 130 47055	BC547B

Power factor correction panel

Various

	4822 212 11555	Power factor corr. panel
J403	4822 265 20531	2P

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C481	4835 121 47597	0.22µF 250V
C482	4835 121 47597	0.22µF 250V
C483	4835 122 47373	1000pF 10% 1kV
C484	4835 122 47373	1000pF 10% 1kV
C485	4835 121 47651	0.22µF 100V
C486	4835 121 47647	560pF 10% 500V
C487	4835 121 47645	2200pF 10% 50V
C488	4835 121 47646	2200pF 5% 50V
C489	4835 124 47563	100µF 50V
C490	4835 124 47733	330pF 5% 50V
C491	4835 121 47406	1µF 20% 63V
C492	4835 121 47406	1µF 20% 63V
C493	4835 121 47648	0.1µF 250V
C494	4835 122 57017	470pF 10% 1kV
C495	4835 122 57017	470pF 10% 1kV
C496	4835 124 47711	220µF 400V
C497	4835 124 47563	100µF 50V
C498	4835 122 47661	220pF 10% 1kV
C500	4835 121 47648	0.1µF 250V
C501	4835 122 47373	1000pF 10% 1kV
C502	4835 122 47373	1000pF 10% 1kV

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R487	4822 100 11391	2k2 30% LIN
R489	4835 116 57764	1M 5% 0.5W
R490	4835 116 57764	1M 5% 0.5W
R491	4835 116 57716	330k 5% 0.5W
R492	4822 110 42192	1M5 5%
R493	4835 116 57715	33k 5% 0.5W
R494	4835 116 57722	39k 5% 0.5W
R495	4835 116 57719	390Ω 5% 0.5W
R496	4835 116 57732	5k6 5% 0.5W
R497	4835 116 57702	1k8 5% 0.5W
R498	4835 110 57187	18k 5% 0.5W
R499	4835 116 57702	1k8 5% 0.5W
R500	4835 116 57712	27k 5% 0.5W
R501	4835 116 57764	1M 5% 0.5W
R502	4835 116 57693	120k 5% 0.5W
R503	4835 116 57698	15k 5% 0.5W
R504	4835 116 57686	10k 5% 0.5W
R505	4835 116 67278	10Ω 5% 1W
R506	4835 116 67282	68Ω 5% 1W
R508	4835 116 57686	10k 5% 0.5W
R509	4835 116 57653	2M2 5% 0.5W
R510	4835 116 67279	150Ω 5% 1W
R511	4835 116 67281	10k 5% 1W
R512	4835 116 57727	47Ω 5% 0.5W
R513	4835 116 67254	0Ω22 5% 1W
R514	4835 116 67254	0Ω22 5% 1W
R515	4835 116 67254	0Ω22 5% 1W
R516	4835 116 67254	0Ω22 5% 1W
R518	4835 112 27045	1Ω 5% 5W
R519	4835 116 57727	47Ω 5% 0.5W
R520	4835 116 57722	39k 5% 0.5W
R521	4835 116 57686	10k 5% 0.5W
R522	4835 116 57727	47Ω 5% 0.5W

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L465	4835 157 58203	Coil
L466	4835 157 58201	Line filter UF19-22SGB
L467	4835 157 58203	Coil
L468	4835 157 58203	Coil
L469	4835 157 67084	Coil
L470	4835 152 27064	Choke
L471	4835 157 58203	Coil
L472	4835 157 58202	Coil
L473	4835 157 58204	Coil
L474	4835 157 58201	Line filter UF1922-SGB

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D435	4822 130 30842	BAV21
D436	4822 130 30842	BAV21
D437	4835 130 37931	GBU6
	4835 290 47086	Spring f/D437
D438	4835 130 37491	MUR860
D439	4822 130 30842	BAV21
Z403	4835 130 37947	BZX79-C27

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IC409	4835 209 88567	L4981A
IC410	4835 209 87585	CNX82A
Q404	4835 130 47055	BC547B
Q405	4835 130 48139	BSS125
Q406	4835 130 47888	STW15NB50
	4835 325 27002	Insulator f/Q406

Interface panel

Various

	4835 219 77726	Interface panel 48"
	4835 219 77742	Interface panel 54"
J10	4822 267 10541	10P
J15	4822 267 10683	9P
J28	4822 267 10538	3P
J32	4822 267 10536	7P
J33	4822 267 10683	9P
J40	4822 267 10683	9P
J41	4822 267 10683	9P
J42	4822 267 10536	7P
J43	4822 267 10684	2P
J62	4822 267 10541	10P
J86	4822 267 10537	5P
J11A	4822 267 10685	12P
J11B	4822 267 10686	11P
J278	4822 267 10537	5P
J300	4822 267 10536	7P
J302	4822 267 10537	5P
J305	4822 267 10538	3P
J307	4822 267 10539	8P
J33A	4822 267 10683	9P
J402	4822 267 10536	7P
J403	4822 267 10536	7P
J467	4822 267 10536	7P
J601	4822 267 10536	7P
J608	4822 267 10541	10P
J751	4822 267 10541	10P

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C1	4835 124 47557	220µF 25V
C2	4835 122 87604	0.022pF 10% 50V
C3	4822 121 42008	0.47µF 63V
C4	4835 124 47708	47µF 25V
C5	4835 122 87375	0.1µF 50V
C6	4835 122 87375	0.1µF 50V
C7	4835 122 87375	0.1µF 50V
C8	4835 122 87381	27pF 5% 50V
C9	4835 124 47729	2200µF 16V
C10	4835 124 47699	1000µF 16V
C11	4835 121 47603	220nF 63V
C12	4835 124 47731	0.22µF 20% 50V
C13	4835 122 87605	3300pF 10% 50V
C14	4835 121 47641	18nF 5% 50V
C15	4835 122 87375	0.1µF 50V
C16	4835 122 87376	220pF 5% 50V
C17	4835 121 47406	1µF 20% 63V
C18	4835 124 47506	4.7µF 50V
C19	4835 122 87608	150pF 5% 50V
C20	4835 122 87451	470pF 5% 50V
C21	4835 121 47603	220nF 63V
C22	4835 124 47731	0.22µF 20% 50V
C23	4835 122 87605	3300pF 10% 50V
C24	4835 121 47641	18nF 5% 50V
C25	4835 122 87376	220pF 5% 50V
C26	4835 121 47406	1µF 20% 63V
C27	4835 122 87451	470pF 5% 50V
C28	4835 124 47506	4.7µF 50V
C30	4835 122 87608	150pF 5% 50V
C31	4835 124 47499	10µF 50V
C32	4835 122 87375	0.1µF 50V
C33	4835 124 47499	10µF 50V
C34	4835 122 87375	0.1µF 50V
C35	4835 122 87375	0.1µF 50V
C36	4835 124 47499	10µF 50V
C37	4835 124 47499	10µF 50V
C38	4835 124 47729	2200µF 16V
C39	4835 124 47501	100µF 25V
C40	4835 124 47501	100µF 25V
C41	4835 121 47603	220nF 63V
C42	4835 124 47501	100µF 25V
C43	4835 124 47499	10µF 50V
C44	4835 124 47501	100µF 25V
C45	4835 124 47499	10µF 50V
C46	5322 122 32531	100pF 5% 50V
C47	4835 122 87017	47pF 5% 50v
C49	4835 122 87607	15pF 5% 50V
C50	4835 124 47499	10µF 50V
C51	4835 124 47503	22µF 50V
C52	4835 124 47506	4.7µF 50V
C53	4835 124 47506	4.7µF 50V
C54	4835 124 47506	4.7µF 50V
C55	4835 124 47506	4.7µF 50V
C56	4835 121 47603	220nF 63V
C57	4835 121 47603	220nF 63V
C58	4835 121 47603	220nF 63V
C59	4835 121 47603	220nF 63V
C60	4835 121 47603	220nF 63V
C61	4835 121 47603	220nF 63V
C62	4835 124 47499	10µF 50V
C63	4835 122 87375	0.1µF 50V
C64	4835 121 47603	220nF 63V
C65	4835 122 87375	0.1µF 50V
C66	4835 124 47499	10µF 50V
C67	4835 124 47506	4.7µF 50V
C68	4835 124 47506	4.7µF 50V
C69	4835 121 47603	220nF 63V

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	4835 111 27056	Jumper
R1	4835 111 37432	100Ω 5% 0.1W
R2	4835 111 37432	100Ω 5% 0.1W
R3	4835 116 57724	4k7 5% 0.5W
R4	4835 111 27052	100k 5% 2W
R5	4835 111 37445	47k 5% 0.1W
R6	4835 111 37445	47k 5% 0.1W
R7	4835 111 37445	47k 5% 0.1W
R8	4835 111 37445	47k 5% 0.1W
R9	4835 111 37445	47k 5% 0.1W
R10	4835 111 37445	47k 5% 0.1W
R11	4822 051 10102	1k 5% 0.1W
R12	4822 051 10102	1k 5% 0.1W
R13	4822 051 10102	1k 5% 0.1W
R14	4822 051 10102	1k 5% 0.1W
R15	4835 116 57714	3k3 5% 0.5W
R16	4835 111 37437	1k5 1% 0.1W
R17	4835 111 37234	2k2 5% 0.1W
R18	4835 116 57731	560Ω 5% 0.5W
R19	4835 116 57686	10k 5% 0.5W
R20	4835 111 37259	470Ω 5% 0.1W
R21	4835 111 37234	2k2 5% 0.1W
R22	4835 111 37432	100Ω 5% 0.1W
R23	4822 051 10102	1k 5% 0.1W
R24	4835 111 27054	560Ω 5% 0.1W
R25	4835 111 27054	560Ω 5% 0.1W
R26	4822 051 10102	1k 5% 0.1W
R27	4835 111 37443	330Ω 5% 0.1W
R28	4835 111 37432	100Ω 5% 0.1W
R29	4835 111 37259	470Ω 5% 0.1W
R30	4835 111 37432	100Ω 5% 0.1W
R31	4835 111 37262	47Ω 5% 0.1W
R32	4835 111 37253	390Ω 5% 0.1W
R33	4835 111 37432	100Ω 5% 0.1W
R34	4835 116 57723	470Ω 1% 0.6W
R35	4835 111 37432	100Ω 5% 0.1W
R36	4835 111 37253	390Ω 5% 0.1W
R37	4835 111 37262	47Ω 5% 0.1W
R38	4822 051 10102	1k 5% 0.1W
R39	4835 111 37273	68k 5% 0.1W
R40	4835 111 27092	91k 5% 0.1W
R41	4835 111 37434	100k 5% 0.1W
R42	4835 111 37277	82k 5% 0.1W
R43	4835 111 37253	390Ω 5% 0.1W
R44	4835 111 27052	100k 5% 2W
R45	4835 111 27042	1k2 5% 0.1W
R46	4835 111 37432	100Ω 5% 0.1W
R47	4835 116 57723	470Ω 1% 0.6W
R48	4835 111 37432	100Ω 5% 0.1W
R49	4835 111 37253	390Ω 5% 0.1W
R50	4835 111 37262	47Ω 5% 0.1W
R51	4835 116 57769	3Ω9 5% 0.5W
R52	4835 116 57769	3Ω9 5% 0.5W
R53	4835 111 37247	3k3 5% 0.1W
R54	4835 111 27082	430Ω 5% 0.1W
R55	4835 111 37441	22k 5% 0.1W
R56	4835 111 37259	470Ω 5% 0.1W
R57	4835 111 27052	100k 5% 2W
R58	4835 111 27052	100k 5% 2W
R59	4835 111 27051	39k 5% 0.1W
R60	4835 111 37273	68k 5% 0.1W
R61	4835 111 37247	3k3 5% 0.1W
R62	4822 051 10102	1k 5% 0.1W
R63	4835 111 37432	100Ω 5% 0.1W
R64	4835 111 37477	56k 5% 0.1W
R65	4835 111 37477	56k 5% 0.1W
R66	4822 051 10102	1k 5% 0.1W
R69	4835 111 37441	22k 5% 0.1W
R70	4835 111 37259	470Ω 5% 0.1W
R71	4835 111 27052	100k 5% 2W
R72	4835 111 27052	100k 5% 2W
R73	4835 111 27051	39k 5% 0.1W
R74	4835 111 37273	68k 5% 0.1W
R75	4822 051 10102	1k 5% 0.1W
R76	4835 111 37247	3k3 5% 0.1W
R77	4822 051 10102	1k 5% 0.1W
R80	4835 111 37432	100Ω 5% 0.1W
R81	4835 111 37477	56k 5% 0.1W
R82	4835 111 37477	56k 5% 0.1W
R83	4822 051 10102	1k 5% 0.1W
R84	4835 111 37247	3k3 5% 0.1W
R86	4835 111 37216	10k 1% 0.1W
R87	4835 116 57686	10k 5% 0.5W
R88	4835 116 67274	10Ω 5% 2W
R89	4835 116 57739	75Ω 5% 0.5W
R90	4835 111 27052	100k 5% 2W
R91	4835 111 37234	2k2 5% 0.1W
R92	4835 111 37371	220Ω 5% 0.1W
R93	4835 111 37443	330Ω 5% 0.1W
R94	4835 111 37443	330Ω 5% 0.1W
R95	4835 111 37443	330Ω 5% 0.1W
R96	4835 111 37443	330Ω 5% 0.1W
R97	4835 111 37443	330Ω 5% 0.1W
R98	4835 111 37443	330Ω 5% 0.1W
R99	4835 111 27052	100k 5% 2W
R100	4835 111 27052	100k 5% 2W
R101	4835 111 37448	8k2 5% 0.1W
R102	4835 111 37448	8k2 5% 0.1W
R103	4835 111 37216	10k 1% 0.1W
R104	4835 111 37216	10k 1% 0.1W
R105	4835 111 37216	10k 1% 0.1W
R106	4835 111 37363	10Ω 5% 0.1W
R107	4835 111 37363	10Ω 5% 0.1W
R108	4835 111 37234	2k2 5% 0.1W
R109	4835 111 37234	2k2 5% 0.1W
R110	4835 111 37443	330Ω 5% 0.1W
R111	4835 111 37477	56k 5% 0.1W
R112	4835 111 27091	2k 5% 0.1W
R113	4822 051 10102	1k 5% 0.1W
R114	4835 111 27052	100k 5% 2W
R115	4835 111 37216	10k 1% 0.1W
R116	4835 111 37371	220Ω 5% 0.1W
R117	4822 051 10102	1k 5% 0.1W
R118	4835 111 37376	5.6k 5% 0.1W
R119	4835 111 37254	3k9 5% 0.1W
R120	4835 111 37234	2k2 5% 0.1W
R121	4835 111 37247	3k3 5% 0.1W
R122	4835 116 67274	10Ω 5% 2W
R123	4835 116 57771	4Ω7 5% 0.5W
R124	4835 113 87018	2Ω2 5% 5W
R125	4835 111 37247	3k3 5% 0.1W
R126	4835 111 37234	2k2 5% 0.1W
R127	4822 051 10102	1k 5% 0.1W
R128	4835 111 37443	330Ω 5% 0.1W
R129	4822 051 10102	1k 5% 0.1W
R130	4835 116 57684	100Ω 5% 0.5W
R131	4835 116 57768	24k 5% 0.5W
R132	4835 116 57723	470Ω 1% 0.6W
R133	4835 111 27085	510Ω 5% 0.1W
R134	4835 111 37432	100Ω 5% 0.1W
R135	4835 116 57723	470Ω 1% 0.6W
R136	4835 116 57723	470Ω 1% 0.6W
R137	4835 116 57723	470Ω 1% 0.6W
R138	4835 111 37259	470Ω 5% 0.1W
R139	4835 116 57723	470Ω 1% 0.6W
R140	4835 111 27082	430Ω 5% 0.1W
R141	4835 116 57723	470Ω 1% 0.6W
R142	4835 116 57723	470Ω 1% 0.6W
R143	4835 111 27048	22Ω 5% 0.1W
R144	4835 116 57724	4k7 5% 0.5W
R145	4835 111 37432	100Ω 5% 0.1W
R146	4835 111 37247	3k3 5% 0.1W
R147	4835 111 37247	3k3 5% 0.1W
R149	4835 111 37458	15k 5% 0.1W
R150	4835 111 37432	100Ω 5% 0.1W
R151	4835 111 37432	100Ω 5% 0.1W
R152	4835 111 37432	100Ω 5% 0.1W
R153	4822 051 10102	1k 5% 0.1W
R154	4835 111 37247	3k3 5% 0.1W
R155	4835 111 37262	47Ω 5% 0.1W
R156	4822 051 10102	1k 5% 0.1W
R157	4835 116 57714	3k3 5% 0.5W
R158	4835 111 37247	3k3 5% 0.1W
R159	4835 111 37247	3k3 5% 0.1W
R160	4835 111 37262	47Ω 5% 0.1W

R161	4822 051 10102	1k 5% 0.1W
R162	4835 111 37262	47Ω 5% 0.1W
R163	4822 051 10102	1k 5% 0.1W
R164	4835 116 57714	3k3 5% 0.5W
R165	4835 111 37247	3k3 5% 0.1W
R166	4835 111 37247	3k3 5% 0.1W
R167	4835 111 37247	3k3 5% 0.1W
R168	4835 111 37432	100Ω 5% 0.1W
R169	4835 111 37262	47Ω 5% 0.1W
R170	4835 111 37216	10k 1% 0.1W
R177	4835 111 37437	1k5 5% 0.1W

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L1	4835 157 67068	10µH
L2	4835 157 67068	10µH
L3	4835 157 67068	10µH
L4	4835 157 67068	10µH
L5	4835 157 67066	6.8µH
L6	4835 157 67067	8.2µH
L7	4835 157 67068	10µH

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D1	4835 130 37905	BAS216
D2	4835 130 37905	BAS216
D3	4835 130 37905	BAS216
D4	4835 130 37905	BAS216
D5	4835 130 37905	BAS216
D6	4835 130 37905	BAS216
D7	4835 130 37905	BAS216
D8	4835 130 37905	BAS216
D9	4835 130 37905	BAS216
D10	4835 130 37905	BAS216
D11	4835 130 37905	BAS216
D12	4835 130 37905	BAS216
D13	4835 130 37905	BAS216
D14	4835 130 37905	BAS216
D15	4835 130 37905	BAS216
D16	4835 130 37905	BAS216
D17	4835 130 37905	BAS216
D18	4835 130 37905	BAS216
D19	4835 130 37905	BAS216
D20	4835 130 37905	BAS216
D21	4835 130 37905	BAS216
D22	4835 130 37946	1N4148
D23	4835 130 37946	1N4148
D24	4835 130 37946	1N4148
D25	4835 130 37946	1N4148
D26	4835 130 37946	1N4148
D27	4835 130 37946	1N4148
D28	4835 130 37905	BAS216
D29	4835 130 37946	1N4148
Z1	4835 130 37945	BZX79-C6V8
Z2	4835 130 37007	BZX79-B5V6

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IC1	4835 209 88562	TDA8444/N4
IC2	4822 209 32742	TL074CN
IC4	4835 209 88521	MC7808CT
IC5	4835 209 88554	MC7812CT
IC6	4835 209 87486	MC7805CT
IC7	4835 209 88521	MC7808CT
IC8	4835 209 88559	TEA6415C
IC9	4822 209 32266	TEA6420
IC9	4822 209 90048	TEA6430
Q1	5322 130 60508	BC857B
Q2	5322 130 60508	BC857B
Q3	5322 130 60508	BC857B
Q4	4822 130 60511	BC847B
Q5	5322 130 60508	BC857B
Q6	5322 130 60508	BC857B
Q7	5322 130 60508	BC857B
Q8	4822 130 60511	BC847B
Q9	5322 130 60508	BC857B
Q10	5322 130 60508	BC857B
Q11	4822 130 60511	BC847B
Q12	5322 130 60508	BC857B
Q13	5322 130 60508	BC857B
Q14	4822 130 60511	BC847B
Q15	4822 130 60511	BC847B
Q16	4822 130 60511	BC847B
Q17	4822 130 60511	BC847B
Q18	4822 130 60511	BC847B
Q19	4822 130 60511	BC847B
Q20	4822 130 60511	BC847B
Q21	4835 130 48131	PH2369
Q22	4822 130 60511	BC847B
Q23	5322 130 60508	BC857B
Q24	5322 130 60508	BC857B
Q25	5322 130 60508	BC857B
Q26	4822 130 60511	BC847B
Q27	5322 130 60845	BC807-25
Q28	5322 130 60508	BC857B
Q29	5322 130 60508	BC857B
Q30	5322 130 60508	BC857B
Q31	5322 130 60508	BC857B
Q32	4822 130 60511	BC847B
Q33	4822 130 60511	BC847B
Q34	5322 130 60508	BC857B
Q35	5322 130 60508	BC857B
Q36	5322 130 60508	BC857B
Q37	5322 130 60508	BC857B
Q38	4822 130 60511	BC847B
Q39	5322 130 60508	BC857B
Q40	4822 130 60511	BC847B

I/O panel

Various

	4822 267 60399	Socket scart blue
	4822 267 60398	Socket scart black
	4822 267 31877	Socket 2 x cinch
	4822 267 31905	Socket cinch SVHS
	4822 267 31906	Socket cinch SVHS + switch
	4822 265 51385	25P male v 1,25
	4822 265 41451	9P male v 1,25
1010	4822 212 11064	I/O panel 48P977/-54P915
1032	4822 212 10858	I/O panel 48PP9-103
1805	4822 242 72527	Crystal 4,00 MHz

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2800	4822 124 81092	47µF 20% 25V
2801	4822 126 13473	220nF 20% 50V
2802	4822 124 81093	10µF 20% 25V
2804	4822 124 81093	10µF 20% 25V
2805	4822 124 81093	10µF 20% 25V
2806	4822 122 33805	330pF 10% 63V
2806	4822 124 81093	10µF 20% 25V
2808	4822 122 33805	330pF 10% 63V
2808	4822 124 81093	10µF 20% 25V
2810	4822 124 81093	10µF 20% 25V
2810	5322 122 32531	100pF 5% 50V
2811	4822 124 81093	10µF 20% 25V
2812	4822 124 81093	10µF 20% 25V
2812	4822 126 13061	220nF 20% 25V
2813	4822 124 81093	10µF 20% 25V
2814	4822 124 81093	10µF 20% 25V
2816	4822 126 13473	220nF 20% 50V
2817	4822 124 81092	47µF 20% 25V
2818	4822 126 13473	220nF 20% 50V
2819	4822 124 81093	10µF 20% 25V
2820	4822 126 13061	220nF 20% 25V
2820	4822 126 13473	220nF 20% 50V
2821	4822 122 32927	220nF 20% 50V
2822	5322 122 32531	100pF 5% 50V
2823	4822 126 13473	220nF 20% 50V
2825	4822 126 13473	220nF 20% 50V
2827	4822 126 13473	220nF 20% 50V
2828	4822 126 13473	220nF 20% 50V
2829	4822 126 13473	220nF 20% 50V
2830	4822 124 81093	10µF 20% 25V
2831	4822 122 33805	330pF 10% 63V
2832	4822 124 81092	47µF 20% 25V
2833	4822 122 33805	330pF 10% 63V
2833▲	5322 122 34123	1nF 10% 50V
2834	4822 122 33575	220pF 5% 50V
2836	5322 122 31863	330pF 5% 50V
2837	5322 122 31863	330pF 5% 50V
2838	5322 122 31863	330pF 5% 50V
2839	4822 126 13473	220nF 20% 50V
2840	4822 126 13473	220nF 20% 50V
2842	4822 124 81093	10µF 20% 25V
2843	5322 122 31863	330pF 5% 50V
2844	4822 126 13061	220nF 20% 25V
2845	4822 126 13473	220nF 20% 50V
2846	4822 124 81093	10µF 20% 25V
2847	4822 124 81093	10µF 20% 25V
2848	5322 122 31863	330pF 5% 50V
2853	5322 122 31863	330pF 5% 50V
2854	5322 122 31863	330pF 5% 50V
2855	5322 122 31863	330pF 5% 50V
2856	5322 122 31863	330pF 5% 50V
2857	4822 126 13473	220nF 20% 50V
2858	5322 122 31863	330pF 5% 50V
2860	4822 124 40248	10µF 20% 63V
2860	5322 122 31863	330pF 5% 50V
2861	4822 117 11188	20K 1% 0.1W
2861	4822 124 41596	22µF 20% 50V
2862	4822 126 13482	470nF 20% 16V
2863	4822 124 41596	22µF 20% 50V
2864	4822 117 11188	20K 1% 0.1W
2864	4822 126 13482	470nF 20% 16V
2865	4822 124 41596	22µF 20% 50V
2865	5322 122 31863	330pF 5% 50V
2866	4822 126 13482	470nF 20% 16V
2866	5322 122 31863	330pF 5% 50V
2867	4822 126 13061	220nF 20% 25V
2868	4822 126 13482	470nF 20% 16V
2868	5322 122 31863	330pF 5% 50V
2869	4822 126 13473	220nF 20% 50V
2869	4822 126 13482	470nF 20% 16V
2870	4822 126 13473	220nF 20% 50V
2870	4822 126 13482	470nF 20% 16V
2871	4822 126 13473	220nF 20% 50V
2871	4822 126 13482	470nF 20% 16V
2872	4822 126 13473	220nF 20% 50V
2872	4822 126 13482	470nF 20% 16V
2873	4822 126 13473	220nF 20% 50V
2874	4822 126 13473	220nF 20% 50V
2880▲	4822 124 40433	47µF 20% 25V
2880	5322 122 32531	100pF 5% 50V
2881	4822 124 40248	10µF 20% 63V
2881	5322 122 32531	100pF 5% 50V
2882	4822 124 40248	10µF 20% 63V
2883	4822 124 40248	10µF 20% 63V
2884	4822 124 40248	10µF 20% 63V
2885	4822 124 40248	10µF 20% 63V
2885	4822 126 13473	220nF 20% 50V
2886	4822 124 40248	10µF 20% 63V
2886	4822 126 13473	220nF 20% 50V
2887	4822 124 40248	10µF 20% 63V
2887	4822 126 13473	220nF 20% 50V
2888	4822 124 40248	10µF 20% 63V
2888	5322 122 32531	100pF 5% 50V
2889	4822 122 33575	220pF 5% 50V
2889	4822 124 41596	22µF 20% 50V
2890	4822 124 40248	10µF 20% 63V
2890	4822 126 13473	220nF 20% 50V
2891	4822 124 40248	10µF 20% 63V
2891	4822 124 81093	10µF 20% 25V
2892	4822 124 40248	10µF 20% 63V
2892	4822 124 81093	10µF 20% 25V
2893	4822 124 40248	10µF 20% 63V
2893	4822 124 81092	47µF 20% 25V
2894	4822 121 42408	220nF 5% 63V
2894	4822 124 40248	10µF 20% 63V
2895	4822 124 40248	10µF 20% 63V
2895	4822 126 13473	220nF 20% 50V
2896	4822 126 10326	180pF 5% 63V
2897	4822 126 10326	180pF 5% 63V
2899▲	5322 122 34123	1nF 10% 50V
2905▲	4822 126 13838	100nF 20% 50V
2915▲	4822 126 13838	100nF 20% 50V
2920	4822 122 33805	330pF 10% 63V
2922	4822 122 33805	330pF 10% 63V
2934▲	4822 126 13838	100nF 20% 50V
2938	5322 122 34098	10nF 10% 63V
2940	4822 122 33805	330pF 10% 63V
2941	4822 122 33805	330pF 10% 63V
2992	5322 122 32658	22pF 5% 50V
2999	5322 122 32658	22pF 5% 50V

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3800▲	4822 052 10478	4Ω7 5% 0.33W
3801	4822 117 11503	220Ω 1% 0.1W
3802	4822 116 83864	10k 5% 0.5W
3803	4822 117 10833	10k 1% 0.1W
3805	4822 117 10834	47k 1% 0.1W
3806▲	4822 051 20102	1k 5% 0.1W
3807▲	4822 051 20102	1k 5% 0.1W
3808	4822 050 11001	100Ω 1% 0.4W
3808	4822 051 10151	150Ω 2% 0.25W
3809	4822 050 17509	75Ω 1% 0.4W
3809	4822 051 10151	150Ω 2% 0.25W
3810	4822 051 20432	4k3 5% 0.1W
3811▲	4822 051 20242	2k4 5% 0.1W
3811	4822 117 10834	47k 1% 0.1W
3812	4822 051 20681	680Ω 5% 0.1W
3812	4822 117 11149	82k 1% 0.1W
3813	4822 116 52228	680Ω 5% 0.5W
3813▲	4822 117 11846	10k 5% 0.1W
3814	4822 050 17509	75Ω 1% 0.4W
3815▲	4822 051 20101	100Ω 5% 0.1W
3818	4822 117 10833	10k 1% 0.1W
3819	4822 117 10833	10k 1% 0.1W
3820	4822 117 10833	10k 1% 0.1W
3821	4822 050 17509	75Ω 1% 0.4W
3821	4822 117 10833	10k 1% 0.1W
3822	4822 051 20362	3k6 5% 0.1W
3822▲	4822 117 11846	10k 5% 0.1W
3823	4822 051 20273	27k 5% 0.1W
3823	4822 117 11149	82k 1% 0.1W
3824	4822 117 10834	47k 1% 0.1W
3824	4822 117 11503	220Ω 1% 0.1W
3825	4822 117 10834	47k 1% 0.1W
3826▲	4822 051 20101	100Ω 5% 0.1W
3826	4822 051 20104	100k 5% 0.1W
3827	4822 117 11449	2k2 1% 0.1W
3828	4822 051 20561	560Ω 5% 0.1W
3829	4822 050 17509	75Ω 1% 0.4W
3829	4822 116 52256	2k2 5% 0.5W
3830	4822 050 11001	100Ω 1% 0.4W
3830	4822 116 52256	2k2 5% 0.5W
3831▲	4822 051 20102	1k 5% 0.1W
3831	4822 051 20561	560Ω 5% 0.1W
3832	4822 117 11449	2k2 1% 0.1W
3833▲	4822 051 20102	1k 5% 0.1W
3833	4822 117 11449	2k2 1% 0.1W
3834	4822 051 20223	22k 5% 0.1W
3834	4822 051 20561	560Ω 5% 0.1W
3835	4822 051 20223	22k 5% 0.1W
3835	4822 117 11449	2k2 1% 0.1W
3836▲	4822 051 20101	100Ω 5% 0.1W
3836	4822 051 20223	22k 5% 0.1W
3837	4822 051 20223	22k 5% 0.1W
3837	4822 051 20561	560Ω 5% 0.1W
3838	4822 117 10833	10k 1% 0.1W
3842	4822 051 20331	330Ω 5% 0.1W
3842▲	4822 051 20332	3k3 5% 0.1W
3843	4822 051 20331	330Ω 5% 0.1W
3843▲	4822 051 20332	3k3 5% 0.1W
3844	4822 050 17509	75Ω 1% 0.4W
3844	4822 117 11449	2k2 1% 0.1W
3845▲	4822 051 20101	100Ω 5% 0.1W
3845	4822 051 20331	330Ω 5% 0.1W
3846	4822 051 20331	330Ω 5% 0.1W
3847	4822 051 10369	36Ω 2% 0.25W
3848▲	4822 051 20472	4k7 5% 0.1W
3849	4822 051 10102	1k 2% 0.25W
3850▲	4822 051 20472	4k7 5% 0.1W
3850	4822 051 20474	470k 5% 0.1W
3851▲	4822 051 20472	4k7 5% 0.1W
3852▲	4822 051 20102	1k 5% 0.1W
3852▲	4822 051 20153	15k 5% 0.1W
3853	4822 051 20561	560Ω 5% 0.1W
3853	4822 117 10833	10k 1% 0.1W
3854▲	4822 051 20153	15k 5% 0.1W
3854	4822 051 20471	470Ω 5% 0.1W
3855	4822 117 10833	10k 1% 0.1W
3856▲	4822 051 20153	15k 5% 0.1W
3856	4822 116 52228	680Ω 5% 0.5W
3857▲	4822 052 10478	4Ω7 5% 0.33W
3857	4822 117 10833	10k 1% 0.1W
3860▲	4822 052 10478	4Ω7 5% 0.33W
3863	4822 050 11001	100Ω 1% 0.4W
3864	4822 050 11001	100Ω 1% 0.4W
3865	4822 050 11004	100k 1% 0.4W
3866	4822 050 16803	68k 1% 0.4W
3866▲	4822 051 20101	100Ω 5% 0.1W
3867	4822 050 11004	100k 1% 0.4W
3867	4822 116 52175	100Ω 5% 0.5W
3868	4822 050 16803	68k 1% 0.4W
3868	4822 116 52175	100Ω 5% 0.5W
3869	4822 051 20104	100k 5% 0.1W
3870	4822 051 20683	68k 5% 0.1W
3871	4822 051 20681	680Ω 5% 0.1W
3871	4822 116 52175	100Ω 5% 0.5W
3872	4822 051 20681	680Ω 5% 0.1W
3872	4822 116 52175	100Ω 5% 0.5W
3875▲	4822 051 20101	100Ω 5% 0.1W
3876	4822 051 10759	75Ω 2% 0.25W
3877	4822 051 10151	150Ω 2% 0.25W
3878	4822 051 10151	150Ω 2% 0.25W
3879	4822 051 10151	150Ω 2% 0.25W
3880	4822 051 20331	330Ω 5% 0.1W
3880▲	4822 052 10478	4Ω7 5% 0.33W
3881	4822 051 10102	1k 2% 0.25W
3882	4822 050 11001	100Ω 1% 0.4W
3882	4822 051 20471	470Ω 5% 0.1W
3883	4822 051 10471	470Ω 2% 0.25W
3884	4822 050 11001	100Ω 1% 0.4W
3884	4822 051 10759	75Ω 2% 0.25W
3885	4822 051 20393	39k 5% 0.1W
3885	4822 117 10833	10k 1% 0.1W
3886	4822 051 10102	1k 2% 0.25W
3886	4822 051 20393	39k 5% 0.1W
3887	4822 051 20331	330Ω 5% 0.1W
3887▲	4822 051 20332	3k3 5% 0.1W
3888	4822 051 10759	75Ω 2% 0.25W
3888▲	4822 117 11846	10k 5% 0.1W
3889	4822 051 10759	75Ω 2% 0.25W
3889▲	4822 117 11846	10k 5% 0.1W
3890	4822 051 10759	75Ω 2% 0.25W
3890▲	4822 051 20332	3k3 5% 0.1W
3891	4822 051 10151	150Ω 2% 0.25W
3891▲	4822 117 11846	10k 5% 0.1W
3892	4822 051 10759	75Ω 2% 0.25W
3892▲	4822 117 11846	10k 5% 0.1W

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3893	4822 051 10151	150Ω 2% 0.25W
3894	4822 051 20224	220k 5% 0.1W
3895	4822 051 20224	220k 5% 0.1W
3895▲	4822 052 10478	4Ω7 5% 0.33W
3896▲	4822 051 20101	100Ω 5% 0.1W
3896▲	4822 052 10478	4Ω7 5% 0.33W
3897▲	4822 051 10472	4k7 2% 0.25W
3897▲	4822 117 11846	10k 5% 0.1W
3898	4822 051 20471	470Ω 5% 0.1W
3899	4822 117 10833	10k 1% 0.1W
3900	4822 051 10471	470Ω 2% 0.25W
3900	4822 051 20561	560Ω 5% 0.1W
3901	4822 051 10759	75Ω 2% 0.25W
3902▲	4822 051 10472	4k7 2% 0.25W
3902	4822 051 20562	5k6 5% 0.1W
3903	4822 051 20224	220k 5% 0.1W
3904	4822 051 10759	75Ω 2% 0.25W
3904	4822 051 20331	330Ω 5% 0.1W
3905	4822 051 10759	75Ω 2% 0.25W
3905	4822 051 20562	5k6 5% 0.1W
3906	4822 051 10759	75Ω 2% 0.25W
3906	4822 051 20561	560Ω 5% 0.1W
3907	4822 051 10759	75Ω 2% 0.25W
3907▲	4822 052 10478	4Ω7 5% 0.33W
3908	4822 051 20562	5k6 5% 0.1W
3909	4822 051 20562	5k6 5% 0.1W
3909	4822 117 10353	150Ω 1% 0.1W
3910	4822 051 10102	1k 2% 0.25W
3910	4822 051 20561	560Ω 5% 0.1W
3911▲	4822 117 11846	10k 5% 0.1W
3913	4822 051 20562	5k6 5% 0.1W
3914	4822 051 20223	22k 5% 0.1W
3915	4822 051 10102	1k 2% 0.25W
3915	4822 051 20562	5k6 5% 0.1W
3916	4822 051 20561	560Ω 5% 0.1W
3917	4822 051 10759	75Ω 2% 0.25W
3917	4822 051 20331	330Ω 5% 0.1W
3918	4822 117 10353	150Ω 1% 0.1W
3919	4822 051 20331	330Ω 5% 0.1W
3920	4822 117 10353	150Ω 1% 0.1W
3921	4822 051 20223	22k 5% 0.1W
3922	4822 051 20224	220k 5% 0.1W
3922▲	4822 052 10478	4Ω7 5% 0.33W
3923▲	4822 117 11846	10k 5% 0.1W
3924▲	4822 051 20101	100Ω 5% 0.1W
3924▲	4822 051 20332	3k3 5% 0.1W
3925	4822 050 17509	75Ω 1% 0.4W
3926▲	4822 052 10478	4Ω7 5% 0.33W
3927	4822 051 20561	560Ω 5% 0.1W
3927▲	4822 052 10478	4Ω7 5% 0.33W
3928▲	4822 052 10478	4Ω7 5% 0.33W
3929	4822 050 11001	100Ω 1% 0.4W
3929▲	4822 052 10478	4Ω7 5% 0.33W
3931	4822 051 20561	560Ω 5% 0.1W
3931▲	4822 052 10478	4Ω7 5% 0.33W
3932	4822 051 20331	330Ω 5% 0.1W
3933	4822 050 17509	75Ω 1% 0.4W
3934	4822 051 20331	330Ω 5% 0.1W
3935▲	4822 052 10478	4Ω7 5% 0.33W
3935	4822 117 10353	150Ω 1% 0.1W
3937	4822 117 10353	150Ω 1% 0.1W
3938	4822 051 20331	330Ω 5% 0.1W
3938	4822 116 52257	22k 5% 0.5W
3939	4822 116 52257	22k 5% 0.5W
3940	4822 051 20182	1k8 5% 0.1W
3941	4822 051 20182	1k8 5% 0.1W
3941	4822 116 52257	22k 5% 0.5W
3942	4822 116 52257	22k 5% 0.5W
3943	4822 051 20223	22k 5% 0.1W
3944	4822 051 20223	22k 5% 0.1W
3945	4822 051 10151	150Ω 2% 0.25W
3946	4822 051 10151	150Ω 2% 0.25W
3954	4822 117 11449	2k2 1% 0.1W
3965	4822 117 10833	10k 1% 0.1W
3966	4822 117 10833	10k 1% 0.1W
3967	4822 117 10833	10k 1% 0.1W
3968	4822 117 10833	10k 1% 0.1W
3970	4822 051 10331	330Ω 2% 0.25W
3971	4822 051 20122	1k2 5% 0.1W
3972	4822 117 11139	1k5 1% 0.1W
3973	4822 051 20474	470k 5% 0.1W
3977	4822 117 10833	10k 1% 0.1W
3980	4822 117 10834	47k 1% 0.1W
3981	4822 117 10834	47k 1% 0.1W
3982	4822 051 20182	1k8 5% 0.1W
3983▲	4822 051 20332	3k3 5% 0.1W
3984	4822 117 11449	2k2 1% 0.1W
3990	4822 116 52175	100Ω 5% 0.5W
3992	4822 051 10102	1k 2% 0.25W
3993	4822 051 10151	150Ω 2% 0.25W
3994	4822 051 10102	1k 2% 0.25W
3995	4822 117 10833	10k 1% 0.1W
3996	4822 051 20471	470Ω 5% 0.1W
3997	4822 051 20471	470Ω 5% 0.1W
3999	4822 051 20279	27Ω 5% 0.1W
4xxx	4822 051 20002	0Ω 5% 0.1W

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5801	4822 157 51216	5.6μH 10%

▶|

6800	4822 130 34328	BZX79-B30
6800	5322 130 83611	BZT55-C5V6
6801	4822 130 34328	BZX79-B30
6802	4822 130 34328	BZX79-B30
6802	5322 130 83611	BZT55-C5V6
6803	4822 130 34328	BZX79-B30
6805	4822 130 34328	BZX79-B30
6806	4822 130 34328	BZX79-B30
6807	4822 130 34328	BZX79-B30
6808	5322 130 83611	BZT55-C5V6
6809	5322 130 83611	BZT55-C5V6
6810	4822 130 34328	BZX79-B30
6810	5322 130 83611	BZT55-C5V6
6811	4822 130 34328	BZX79-B30
6811	5322 130 83611	BZT55-C5V6
6812	4822 130 34328	BZX79-B30
6812	5322 130 83611	BZT55-C5V6
6813	4822 130 34328	BZX79-B30
6813	5322 130 83611	BZT55-C5V6
6814	4822 130 34328	BZX79-B30
6814	5322 130 83611	BZT55-C5V6
6815	5322 130 83611	BZT55-C5V6
6816	5322 130 83611	BZT55-C5V6
6817	5322 130 83611	BZT55-C5V6
6818	4822 130 34328	BZX79-B30
6818	5322 130 83611	BZT55-C5V6
6819	4822 130 34328	BZX79-B30
6819	5322 130 83611	BZT55-C5V6
6821	4822 130 82346	BZV55-C27
6823	4822 130 82346	BZV55-C27
6824	5322 130 83609	LS4148/GS08
6826	4822 130 82346	BZV55-C27
6827	4822 130 82346	BZV55-C27
6830	4822 130 82346	BZV55-C27
6831	4822 130 82346	BZV55-C27
6832	4822 130 82346	BZV55-C27
6833	4822 130 82346	BZV55-C27
6834	4822 130 82346	BZV55-C27
6835	4822 130 82346	BZV55-C27
6836	4822 130 82346	BZV55-C27
6837	4822 130 82346	BZV55-C27
6838	4822 130 82346	BZV55-C27
6839	4822 130 82346	BZV55-C27
6840	4822 130 82346	BZV55-C27
6841	4822 130 82346	BZV55-C27
6842	4822 130 82346	BZV55-C27
6843	4822 130 82346	BZV55-C27
6844	4822 130 82346	BZV55-C27
6845	4822 130 82346	BZV55-C27
6846	4822 130 82346	BZV55-C27
6847	4822 130 82346	BZV55-C27
6848	4822 130 82346	BZV55-C27
6849	4822 130 82346	BZV55-C27
6851	5322 130 83609	LS4148/GS08
6856	4822 130 34328	BZX79-B30
6920	4822 130 34328	BZX79-B30
6921	4822 130 34328	BZX79-B30
6922	4822 130 34328	BZX79-B30
6923	4822 130 34328	BZX79-B30
6942	4822 130 34328	BZX79-B30
6944	4822 130 34328	BZX79-B30
6945	4822 130 34328	BZX79-B30
6946	4822 130 34328	BZX79-B30
6947	4822 130 34328	BZX79-B30
6948	4822 130 34328	BZX79-B30
6949	4822 130 34328	BZX79-B30

⊗▭

7701	4822 209 30095	LM833D
7800▲	5322 130 41982	BC848B
7802	5322 130 42136	BC848C
7803▲	5322 130 41982	BC848B
7804▲	5322 130 41982	BC848B
7805▲	5322 130 41982	BC848B
7806▲	5322 130 41982	BC848B
7808▲	5322 130 41982	BC848B
7810▲	5322 130 41982	BC848B
7811▲	5322 130 41982	BC848B
7812▲	5322 130 41982	BC848B
7814	4822 209 90046	TMP47C203N
7815▲	4822 209 90051	TDA8601/C1
7817	4822 209 80631	LM339N-00
7819▲	4822 130 44197	BC558B
7820▲	5322 130 41982	BC848B
7822	4822 209 90048	TEA6430
7823	4822 209 33314	TEA6417
7825▲	5322 130 41982	BC848B
7830	5322 130 41983	BC858B
7831▲	5322 130 41982	BC848B
7850	4822 130 40937	BC548B
7857▲	4822 130 44197	BC558B
7860	4822 209 33314	TEA6417
7880	4822 209 32266	TEA6420
7905	4822 130 40937	BC548B
7908	4822 130 40937	BC548B
7915	4822 130 40937	BC548B
7918	4822 130 40937	BC548B
7930	4822 130 40937	BC548B
7935	4822 130 40937	BC548B
7940▲	5322 130 41982	BC848B
7941▲	5322 130 41982	BC848B

PIP

Various

	4822 267 51433	10P female
	4822 267 41205	4P
1011	4822 212 32425	PIP P/M 2°T 1FH
1011	4822 212 10641	PIP Latam 1FH
1750	4822 242 81995	Xtal 3.579545 MHz
1755	4822 242 10324	Xtal 3.575611 MHz
1760	4822 242 10325	Xtal 3.582056 MHz
1765	4822 242 81996	Xtal 4.433619 MHz
1775	4822 210 20338	UV1216D/PH
1775	4822 210 10695	UV1236/PH
1788	4822 242 81966	Xtal 21.059 MHz
1920	4822 242 80295	Filter OFWG396-2M
1920	4822 242 81134	Filter OFWH3951

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2755▲	5322 122 32654	22nF 10% 63V
2756	4822 124 41576	2.2μF 20% 50V
2758	4822 124 41643	100μF 20% 16V
2759	4822 126 13473	220nF 20% 50V
2760	4822 126 13482	470nF 20% 16V
2761▲	4822 124 40433	47μF 20% 25V
2762▲	4822 126 10002	100nF 20% 25V
2766	4822 124 41643	100μF 20% 16V
2767	4822 124 40756	1μF 20% 100V
2768	4822 124 41643	100μF 20% 16V
2770	4822 124 40756	1μF 20% 100V
2772	4822 124 40756	1μF 20% 100V
2778▲	4822 126 10002	100nF 20% 25V
2780▲	4822 126 10002	100nF 20% 25V
2781	4822 126 13473	220nF 20% 50V
2782	4822 126 13473	220nF 20% 50V
2784	4822 126 13473	220nF 20% 50V
2786▲	4822 126 10002	100nF 20% 25V
2787	5322 122 31946	27pF 5% 63V
2788▲	4822 126 10002	100nF 20% 25V
2789	5322 122 31946	27pF 5% 63V
2790▲	5322 122 32654	22nF 10% 63V
2792▲	4822 126 10002	100nF 20% 25V
2794▲	4822 126 12944	47nF 10% 50V
2796▲	4822 126 12944	47nF 10% 50V
2798▲	4822 126 10002	100nF 20% 25V
2800	4822 122 33219	1.8nF 10% 50V
2802	5322 122 32531	100pF 5% 50V
2810	4822 126 13473	220nF 20% 50V
2812▲	4822 126 10002	100nF 20% 25V
2816▲	4822 126 10002	100nF 20% 25V
2821	5322 122 32287	4.7pF 5% 50V
2822▲	4822 126 12944	47nF 10% 50V
2823	5322 122 32287	4.7pF 5% 50V
2824▲	4822 126 12944	47nF 10% 50V
2825	5322 122 32287	4.7pF 5% 50V
2826▲	4822 126 12944	47nF 10% 50V
2828▲	4822 126 12944	47nF 10% 50V
2830▲	4822 126 12944	47nF 10% 50V
2832▲	4822 126 12944	47nF 10% 50V
2844▲	5322 122 32654	22nF 10% 63V
2846▲	4822 126 10002	100nF 20% 25V
2848▲	5322 126 10223	4.7nF 10% 63V
2850▲	5322 126 10223	4.7nF 10% 63V
2852	4822 122 33575	220pF 5% 50V
2853	4822 122 33575	220pF 5% 50V
2854	4822 122 22575	220pF 5% 50V
2856	4822 122 33575	220pF 5% 50V
2862▲	5322 122 32654	22nF 10% 63V
2863	4822 122 32614	1.2nF 10% 50V
2866▲	4822 126 12944	47nF 10% 50V
2867▲	4822 126 10002	100nF 20% 25V
2869	4822 122 32535	680pF 10% 63V
2874▲	5322 122 34123	1nF 10% 50V
2876	5322 122 32661	56pF 5% 50V
2910	4822 124 41643	100μF 20% 16V

□

3754▲	4822 051 20101	100Ω 5% 0.1W
3756▲	4822 051 20101	100Ω 5% 0.1W
3762	4822 117 11503	220Ω 1% 0.1W
3764	4822 117 11503	220Ω 1% 0.1W
3766	4822 117 11503	220Ω 1% 0.1W
3800	4822 117 11448	180Ω 1% 0.1W
3802	4822 117 11503	220Ω 1% 0.1W
3804	4822 051 20391	390Ω 5% 0.1W
3806	4822 117 11503	220Ω 1% 0.1W
3810▲	4822 051 20101	100Ω 5% 0.1W
3812	4822 051 10102	1k 2% 0.25W
3813	4822 117 10834	47k 1% 0.1W
3814▲	4822 051 20008	0Ω 5% 0.1W
3816	4822 051 20562	5k6 5% 0.1W
3818	4822 117 11449	2k2 1% 0.1W
3820	4822 051 20104	100k 5% 0.1W
3821	4822 051 20681	680Ω 5% 0.1W
3823	4822 051 20681	680Ω 5% 0.1W
3825	4822 051 20681	680Ω 5% 0.1W
3826	4822 116 52283	4k7 5% 0.5W
3830	4822 051 20273	27k 5% 0.1W
3831	4822 116 80176	1Ω 5% 0.5W
3832	4822 116 52283	4k7 5% 0.5W
3833	4822 117 10833	10k 1% 0.1W
3834	4822 117 11449	2k2 1% 0.1W
3835	4822 051 10102	1k 2% 0.25W
3835▲	4822 051 20008	0Ω 5% 0.1W
3836	4822 051 10102	1k 2% 0.25W
3838▲	4822 051 20008	0Ω 5% 0.1W
3840	4822 051 10102	1k 2% 0.25W
3842	4822 117 10353	150Ω 1% 0.1W
3844	4822 116 52257	22k 5% 0.5W
3846	4822 116 52175	100Ω 5% 0.5W
3848	4822 116 52175	100Ω 5% 0.5W
3850▲	4822 051 20472	4k7 5% 0.1W
3852▲	4822 051 20472	4k7 5% 0.1W
3858	4822 117 11503	220Ω 1% 0.1W
3859	4822 051 20106	10M 55 0.1W
3859	4822 051 20829	82Ω 5% 0.1W
3863	4822 051 20471	470Ω 5% 0.1W
3864	4822 117 11503	220Ω 1% 0.1W
3869	4822 051 20391	390Ω 5% 0.1W
3870	4822 116 52175	100Ω 5% 0.5W
3872	4822 116 52175	100Ω 5% 0.5W
3873	4822 117 11448	180Ω 1% 0.1W
3874	4822 051 20682	6k8 5% 0.1W
3876	4822 117 11139	1k5 1% 0.1W
3877	4822 117 11449	2k2 1% 0.1W
3878	4822 051 20112	1k1 5% 0.1W
3879	4822 051 10102	1k 2% 0.25W
3880	4822 117 11503	220Ω 1% 0.1W
3882	4822 051 20331	330Ω 5% 0.1W
3884	4822 051 20331	330Ω 5% 0.1W
3886	4822 051 20331	330Ω 5% 0.1W
3890	4822 051 20561	560Ω 5% 0.1W
3894▲	4822 051 20008	0Ω 5% 0.1W
3906▲	4822 052 10229	22Ω 5% 0.33W
3908▲	4822 052 10228	2Ω2 5% 0.33W
3910▲	4822 052 10228	2Ω2 5% 0.33W
3912	4822 101 11191	10k 30% LIN
3914	4822 051 20822	8k2 5% 0.1W
3916	4822 051 20822	8k2 5% 0.1W
4xxx	4822 051 10008	0Ω 5% 0.25W
4xxx	4822 051 20008	0Ω 5% 0.1W

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5754	4822 157 60122	4.7μH 10%
5756	4822 157 60122	4.7μH 10%
5757	4822 157 60122	4.7μH 10%
5760	4822 157 60122	4.7μH 10%
5762	4822 157 60122	4.7μH 10%
5920	4822 157 53302	1μH
9604	4822 157 60122	4.7μH 10%
9610	4822 157 60122	4.7μH 10%

▶|

6750	5322 130 80255	BZX84-C8V2
6752	4822 130 80542	BZX84-C33
6754▲	4822 130 30621	1N4148
6756▲	4822 130 30621	1N4148
6758▲	4822 130 30621	1N4148
6813▲	5322 130 31928	BAS16
6814▲	5322 130 31928	BAS16

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⊗▭

7750	4822 209 90031	TDA8310/N1
7751	4822 209 90036	TDA8395T/N2
7762	5322 130 41983	BC858B
7764	5322 130 41983	BC858B
7766	5322 130 41983	BC858B
7788	4822 209 90026	SDA9288X
7800▲	5322 130 41982	BC848B
7810	5322 130 44349	BC635
7833	5322 130 42136	BC848C
7858▲	5322 130 41982	BC848B
7864▲	5322 130 41982	BC848B
7877	5322 130 41983	BC858B

SOUND-DEC-PTV

Various

	4822 265 20712	8P
	4822 267 51433	10P
1009	4822 212 11349	Sound decoder - /75
1009	4822 212 11073	Sound decoder
1009	4822 212 10853	BTSC decoder - /77
1531	4822 156 11158	Filter 6.555 MHz
1532	4822 156 11157	Filter 5.855 MHz
1534	4822 242 81188	Xtal 13.104 MHz
1535	4822 242 81187	Xtal 11.700 MHz
1550	4822 242 81639	Xtal 8.192 MHz
1578	4822 242 80271	Filter 4.5 MHz
1579	4822 242 70714	Filter 5.5 MHz
1580	4822 242 71841	Filter 6.0 MHz
1581	4822 242 72059	Filter 6.5 MHz
1582	4822 242 70485	Filter 5.74 MHz
1583	4822 242 80292	Filter 6.74 MHz
1605	4822 242 80276	Crystal 10 MHz

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2524▲	4822 126 12944	47nF 10% 50V
2525▲	5322 122 34123	1nF 10% 50V
2527	5322 122 32269	6.8pF 5% 50V
2528▲	4822 126 13838	100nF 20% 50V
2529▲	4822 126 12944	47nF 10% 50V
2531▲	5322 122 34123	1nF 10% 50V
2533	5322 122 33538	150pF 2% 63V
2534▲	4822 126 13838	100nF 20% 50V
2535▲	4822 126 13838	100nF 20% 50V
2536	5322 122 32659	33pF 5% 50V
2537	5322 122 32531	100pF 5% 50V
2538	5322 122 32659	33pF 5% 50V
2539	5322 122 32531	100pF 5% 50V
2540	5322 122 31863	330pF 5% 50V
2541	5322 122 31866	6.8nF 10% 63V
2542	5322 122 33538	150pF 2% 63V
2543	5322 122 33538	150pF 2% 63V
2544	5322 122 33538	150pF 2% 63V
2546▲	5322 122 32654	22nF 10% 63V
2547	4822 126 12102	330nF 20% 50V
2548	5322 122 34098	10nF 10% 63V
2549▲	5322 122 34123	1nF 10% 50V
2550▲	5322 122 34123	1nF 10% 50V
2551	5322 122 31863	330pF 5% 50V
2552▲	4822 124 40433	47μF 20% 25V
2553▲	4822 126 13838	100nF 20% 50V
2554▲	4822 124 40433	47μF 20% 25V
2555	4822 126 13694	68pF 1% 63V
2557	5322 122 31863	330pF 5% 50V
2558▲	4822 126 13838	100nF 20% 50V
2559	4822 126 13061	220nF 20% 25V
2560	5322 122 33446	3.3nF 10% 63V
2561	4822 122 33216	270pF 5% 50V
2562▲	4822 124 40433	47μF 20% 25V
2563▲	4822 126 13838	100nF 20% 50V
2564▲	4822 124 40433	47μF 20% 25V
2565▲	4822 126 13838	100nF 20% 50V
2566	4822 122 33216	270pF 5% 50V
2567	4822 126 13694	68pF 1% 63V
2568	5322 122 31863	330pF 5% 50V
2569	4822 124 40248	10μF 20% 63V
2570	5322 122 33446	3.3nF 10% 63V
2571	4822 122 33216	270pF 5% 50V
2573▲	4822 124 40433	47μF 20% 25V
2574▲	5322 122 32654	22nF 10% 63V
2575	4822 124 40248	10μF 20% 63V
2576	4822 126 12102	330nF 20% 50V
2577	4822 124 40248	10μF 20% 63V
2579	4822 122 33216	270pF 5% 50V
2580	4822 126 12102	330nF 20% 50V
2581	4822 126 12102	330nF 20% 50V
2582	4822 126 12102	330nF 20% 50V
2583	4822 126 12102	330nF 20% 50V
2584	4822 126 12102	330nF 20% 50V
2586	4822 124 40248	10μF 20% 63V
2590	4822 124 40248	10μF 20% 63V
2591	5322 122 34098	10nF 10% 63V
2592	4822 124 40248	10μF 20% 63V
2593	4822 124 41576	2.2μF 20% 50V
2594	4822 124 41576	2.2μF 20% 50V
2596	4822 126 13061	220nF 20% 25V
2597	4822 126 13061	220nF 20% 25V
2598	4822 122 33806	820pF 10% 63V
2600	5322 122 34098	10nF 10% 63V
2601	5322 122 34098	10nF 10% 63V
2602	4822 126 13061	220nF 20% 25V
2603▲	4822 126 13838	100nF 20% 50V
2604	4822 121 51361	5.6nF 2% 160V
2605	4822 124 40248	10μF 20% 63V
2606	5322 122 34098	10nF 10% 63V
2607	4822 124 41584	100μF 20% 10V
2608▲	4822 126 13838	100nF 20% 50V
2610	5322 122 32531	100pF 5% 50V
2611▲	4822 126 12944	47nF 10% 50V
2612▲	4822 126 12944	47nF 10% 50V
2613▲	4822 124 40433	47μF 20% 25V
2614▲	4822 126 13838	100nF 20% 50V
2615▲	5322 122 32654	22nF 10% 63V
2616▲	5322 122 32654	22nF 10% 63V
2617▲	5322 122 34123	1nF 10% 50V
2618▲	4822 122 32627	2.7nF 10% 50V
2619▲	4822 124 40433	47μF 20% 25V
2620▲	4822 126 12944	47nF 10% 50V
2621	4822 122 33127	2.2nF 10% 63V
2622	4822 124 40242	1μF 20% 63V
2623	4822 126 12102	330nF 20% 50V
2625▲	4822 126 13838	100nF 20% 50V
2630	5322 122 34098	10nF 10% 63V
2631	5322 122 34098	10nF 10% 63V
2633	5322 122 34098	10nF 10% 63V
2634	5322 122 34098	10nF 10% 63V
2635	5322 122 34098	10nF 10% 63V
2638	5322 122 34098	10nF 10% 63V
2642	5322 122 34098	10nF 10% 63V
2644	5322 122 33538	150pF 2% 63V
2646	4822 124 40248	10μF 20% 63V

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3523	4822 117 11504	270Ω 1% 0.1W
3524	4822 117 11504	270Ω 1% 0.1W
3525	4822 117 11383	12k 1% 0.1W
3526	4822 051 20392	3k9 5% 0.1W
3527	4822 117 11504	270Ω 1% 0.1W
3528	4822 117 11504	270Ω 1% 0.1W
3529	4822 051 20339	33Ω 5% 0.1W
3530	4822 051 20561	560Ω 5% 0.1W
3531	4822 051 20182	1k8 5% 0.1W
3532	4822 051 20182	1k8 5% 0.1W
3533	4822 051 20104	100k 5% 0.1W
3534	4822 051 20569	56Ω 5% 0.1W
3535▲	4822 051 20332	3k3 5% 0.1W
3536▲	4822 051 20229	22Ω 5% 0.1W
3537▲	4822 051 20332	3k3 5% 0.1W
3538	4822 051 10159	15Ω 2% 0.25W
3539	4822 117 11149	82k 1% 0.1W
3540	4822 051 20104	100k 5% 0.1W
3541	4822 051 20223	22k 5% 0.1W
3542	4822 051 20223	22k 5% 0.1W
3543	4822 051 20392	3k9 5% 0.1W
3544	4822 051 20223	22k 5% 0.1W
3545	4822 051 20273	27k 5% 0.1W
3547	4822 051 20104	100k 5% 0.1W
3548	4822 051 20104	100k 5% 0.1W
3549▲	4822 117 11846	10k 5% 0.1W
3550▲	4822 051 20102	1k 5% 0.1W
3552	4822 051 20105	1M 5% 0.1W
3553	4822 050 12209	22Ω 1% 0.4W
3554	4822 117 11148	56k 1% 0.1W
3555	4822 051 20224	220k 5% 0.1W
3557	4822 117 11148	56k 1% 0.1W
3560▲	4822 051 20102	1k 5% 0.1W
3561▲	4822 117 11846	10k 5% 0.1W
3563▲	4822 117 11846	10k 5% 0.1W
3566▲	4822 117 11846	10k 5% 0.1W
3567▲	4822 051 20102	1k 5% 0.1W
3568▲	4822 117 11846	10k 5% 0.1W
3569▲	4822 117 11846	10k 5% 0.1W
3570▲	4822 117 11846	10k 5% 0.1W
3571	4822 117 11507	6k8 1% 0.1W
3571▲	4822 051 20008	0Ω 5% 0.1W
3572▲	4822 117 11846	10k 5% 0.1W
3573	4822 117 11507	6k8 1% 0.1W
3573▲	4822 051 20008	0Ω 5% 0.1W
3574▲	4822 117 11846	10k 5% 0.1W
3575	4822 117 11507	6k8 1% 0.1W
3576	4822 051 20224	220k 5% 0.1W
3577▲	4822 117 11846	10k 5% 0.1W
3578▲	4822 051 20102	1k 5% 0.1W
3579	4822 051 20561	560Ω 5% 0.1W
3580	4822 051 20471	470Ω 5% 0.1W
3581	4822 051 20471	470Ω 5% 0.1W
3582	4822 051 20561	560Ω 5% 0.1W
3583	4822 051 20471	470Ω 5% 0.1W
3584	4822 050 12703	27k 1% 0.4W
3586	4822 117 11507	6k8 1% 0.1W
3590	4822 051 20562	5k6 5% 0.1W
3591▲	4822 117 11846	10k 5% 0.1W
3593▲	4822 051 20101	100Ω 5% 0.1W
3594▲	4822 051 20101	100Ω 5% 0.1W
3595▲	4822 051 20101	100Ω 5% 0.1W
3596▲	4822 117 11846	10k 5% 0.1W
3597▲	4822 051 20101	100Ω 5% 0.1W
3601▲	4822 052 10228	2Ω2 5% 0.33W
3602	4822 051 20105	1M 5% 0.1W
3603	4822 051 20105	1M 5% 0.1W
3604▲	4822 052 10109	10Ω 5% 0.33W
3605▲	4822 052 10109	10Ω 5% 0.33W
3606▲	4822 052 10109	10Ω 5% 0.33W
3607▲	4822 051 20472	4k7 5% 0.1W
3608	4822 117 10834	47k 1% 0.1W
3609	4822 051 20104	100k 5% 0.1W
3610	4822 051 20105	1M 5% 0.1W
3611	4822 051 20104	100k 5% 0.1W
3612▲	4822 051 20102	1k 5% 0.1W
3613	4822 051 20474	470k 5% 0.1W
3614▲	4822 117 11846	10k 5% 0.1W
3615▲	4822 117 11846	10k 5% 0.1W
3616	4822 051 20331	330Ω 5% 0.1W
3617▲	4822 051 20229	22Ω 5% 0.1W
3620	4822 051 20154	150k 5% 0.1W
3621	4822 051 20154	150k 5% 0.1W
3622▲	4822 051 20102	1k 5% 0.1W
3623	4822 051 20104	100k 5% 0.1W
3624	4822 051 20681	680Ω 5% 0.1W
3625▲	4822 117 11846	10k 5% 0.1W
3626▲	4822 117 11846	10k 5% 0.1W
3627▲	4822 117 11846	10k 5% 0.1W
3628▲	4822 051 20101	100Ω 5% 0.1W
3629▲	4822 051 20101	100Ω 5% 0.1W
3630	4822 117 10834	47k 1% 0.1W
3631▲	4822 051 20472	4k7 5% 0.1W
3632▲	4822 051 20332	3k3 5% 0.1W
3633▲	4822 051 20102	1k 5% 0.1W
3634▲	4822 051 20472	4k7 5% 0.1W
3635▲	4822 051 20332	3k3 5% 0.1W
3637▲	4822 117 11846	10k 5% 0.1W
3638▲	4822 117 11846	10k 5% 0.1W
3640▲	4822 117 11846	10k 5% 0.1W
3641▲	4822 117 11846	10k 5% 0.1W
3642▲	4822 117 11846	10k 5% 0.1W
3643▲	4822 117 11846	10k 5% 0.1W
3644	4822 051 20104	100k 5% 0.1W
3645	4822 117 11384	2k7 1% 0.1W
3646▲	4822 051 20102	1k 5% 0.1W
3647	4822 051 20224	220k 5% 0.1W
4xxx	4822 051 20008	0Ω 5% 0.1W

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5535	4822 157 53473	1000μH 10%
5537	4822 157 53473	1000μH 10%
5590	4822 156 21293	1500μH 5%
5600	4822 157 51216	5.6μH 10%
5601	4822 157 51216	5.6μH 10%
5602	4822 157 51216	5.6μH 10%
5603	4822 157 51216	5.6μH 10%
5604	4822 157 51216	5.6μH 10%
5605	4822 157 51216	5.6μH 10%
5606	4822 157 51216	5.6μH 10%
5610▲	4822 157 52285	6.8μH 10%
5611▲	4822 157 52285	6.8μH 10%
5612▲	4822 158 10604	6.8μH 10%
5613▲	4822 157 52285	6.8μH 10%
5618	4822 157 70698	27μH 10%
5619▲	4822 157 53941	100μH 10%

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6535	5322 130 34953	BB405B
6540	5322 130 34953	BB405B
6545	5322 130 31684	BB809
6555▲	4822 130 30621	1N4148
6594▲	4822 130 30621	1N4148
6595▲	4822 130 30621	1N4148
6612▲	4822 130 30621	1N4148
6622▲	5322 130 80617	BAT81
6623▲	5322 130 80617	BAT81
6624	4822 130 80655	BZX79-F2V4

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7525	5322 130 42136	BC848C
7526	5322 130 42136	BC848C
7530	5322 130 41983	BC858B
7535	4822 209 30909	TDA8732/C1
7545▲	5322 130 41982	BC848B
7550	4822 209 32959	SAA7282AZP
7561▲	4822 209 83163	LM833N
7576▲	5322 130 41982	BC848B
7590	4822 209 63998	TDA9820
7600	4822 209 32863	TDA9840/V2
7608	5322 130 41983	BC858B
7610	4822 209 70672	LM358N SEL.
7615	5322 130 42136	BC848C
7620	5322 130 42136	BC848C
7624	5322 130 41983	BC858B
7625▲	5322 130 41982	BC848B
7630	5322 209 10883	PCF8574P
7631▲	5322 130 41982	BC848B
7632▲	5322 130 41982	BC848B
7638▲	5322 130 41982	BC848B
7642▲	5322 130 41982	BC848B
7647▲	5322 130 41982	BC848B

SSP-PTV

Various

	4822 267 50887	IC socket 8P
	4822 267 70255	IC socket 32P
	4822 404 31305	Support
	4822 265 41461	10P male 2,5
	4822 265 51382	23P male 1,25
	4822 265 31248	3P male 1,25
	4822 265 51385	25P male 1,25
▲	4822 265 41462	7P male 1,25
	4822 265 41451	9P male
	4822 265 41448	7P male grey
	4822 267 31918	3P male 1.25 green
	4822 265 41465	8P male 2,5
▲	4822 265 41466	10P male 2,5
	4822 265 51384	15P male 1,25
	4822 267 10533	4P
	4822 265 31009	3P strip
1005	4822 212 11074	SSP PTV P/M
1005	4822 212 11591	SSP PTV Europe
1005	4822 212 11589	SSP PTV Latam
1200	4822 242 72572	Crystal 12 MHz
1300	4822 210 10654	FV916MG/PH
1300	4822 210 10727	FI1236MKII/PH
1350	4822 242 10326	Filter 3.582056 MHz
1352	4822 242 82071	Filter 4.433619 MHz
1352	4822 242 10327	Filter 3.575611 MHz
1353	4822 242 82071	Filter 4.433619 MHz
1354	4822 242 82072	Filter 3.579545 MHz
1354	4822 242 82071	Filter 4.433619 MHz

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2012	5322 122 33861	120pF 10% 50V
2012	5322 122 33538	150pF 2% 63V
2029▲	4822 126 13838	100nF 20% 50V
2180	5322 122 34098	10nF 10% 63V
2181	5322 122 34098	10nF 10% 63V
2183▲	4822 126 13838	100nF 20% 50V
2190▲	4822 126 13838	100nF 20% 50V
2192▲	4822 126 13838	100nF 20% 50V
2193	5322 122 31866	6.8nF 10% 63V
2194	5322 122 33446	3.3nF 10% 63V
2195	5322 122 33446	3.3nF 10% 63V
2196	5322 122 33446	3.3nF 10% 63V
2197	5322 122 31866	6.8nF 10% 63V
2199	4822 126 13061	220nF 20% 25V
2200	4822 124 40248	10μF 20% 63V
2201▲	4822 126 13838	100nF 20% 50V
2202▲	4822 126 13838	100nF 20% 50V
2203▲	4822 126 13838	100nF 20% 50V
2204	5322 122 32658	22pF 5% 50V
2205	5322 122 33869	15pF 5% 63V
2206▲	4822 126 13838	100nF 20% 50V
2208▲	4822 126 13838	100nF 20% 50V
2209▲	4822 126 13838	100nF 20% 50V
2212▲	4822 126 13838	100nF 20% 50V
2213▲	4822 124 40433	47μF 20% 25V
2214	4822 124 40763	2.2μF 100 V
2225▲	4822 124 40433	47μF 20% 25V
2226	5322 122 34098	10nF 10% 63V
2232	4822 124 81029	100μF 20% 25V
2233	5322 122 34098	10nF 10% 63V

2250	5322 122 32452	47pF 5% 63V
2300▲	4822 126 13838	100nF 20% 50V
2301▲	4822 126 13838	100nF 20% 50V
2302▲	4822 124 81021	100µF 20% 16V
2304	4822 126 13628	220N 20% 50V
2306	4822 124 40763	2.2µF 100V
2308▲	5322 122 32654	22nF 10% 63V
2312▲	4822 124 81144	1000U 16V
2349	5322 122 33869	15pF 5% 63V
2350▲	4822 126 13838	100nF 20% 50V
2351▲	4822 126 13838	100nF 20% 50V
2352▲	4822 126 13838	100nF 20% 50V
2354▲	4822 126 13838	100nF 20% 50V
2355▲	4822 126 13838	100nF 20% 50V
2356▲	4822 126 13838	100nF 20% 50V
2357▲	4822 124 81021	100µF 20% 16V
2358▲	4822 126 13838	100nF 20% 50V
2359▲	4822 124 81021	100µF 20% 16V
2360	5322 122 32661	56pF 5% 50V
2361	5322 122 32661	56pF 5% 50V
2361	4822 126 13694	68pF 1% 63V
2362▲	4822 126 13838	100nF 20% 50V
2363▲	4822 126 13838	100nF 20% 50V
2364▲	4822 126 13838	100nF 20% 50V
2365▲	4822 124 81021	100µF 20% 16V
2366▲	4822 126 13838	100nF 20% 50V
2367	4822 124 40242	1µF 20% 63V
2368▲	4822 121 43823	470nF 5% 50V
2369▲	4822 124 81021	100µF 20% 16V
2370▲	4822 122 32627	2.7nF 10% 50V
2371	4822 124 41584	100µF 20% 10V
2373▲	4822 126 13838	100nF 20% 50V
2380▲	4822 126 13838	100nF 20% 50V
2381▲	4822 126 13838	100nF 20% 50V
2382▲	4822 126 13838	100nF 20% 50V
2383▲	4822 124 40433	47µF 20% 25V
2384	5322 122 33869	15pF 5% 63V
2385▲	4822 126 13838	100nF 20% 50V
2386	5322 122 33869	15pF 5% 63V
2387▲	4822 124 40433	47µF 20% 25V
2388	5322 122 33869	15pF 5% 63V
2390▲	4822 126 13838	100nF 20% 50V
2391	4822 122 33127	2.2nF 10% 63V
2392▲	4822 122 33496	100nF 10% 63V
2393▲	4822 126 13838	100nF 20% 50V
2394▲	4822 126 13838	100nF 20% 50V
2395▲	4822 126 13838	100nF 20% 50V
2396▲	4822 126 13838	100nF 20% 50V
2397	5322 122 33869	15pF 5% 63V
2400	5322 122 34098	10nF 10% 63V
2500▲	4822 126 12944	47nF 10% 50V
2506▲	5322 122 32654	22nF 10% 63V
2508▲	5322 122 32654	22nF 10% 63V
2510▲	5322 122 32654	22nF 10% 63V
2512▲	5322 122 32654	22nF 10% 63V
2514▲	5322 122 32654	22nF 10% 63V
2516▲	5322 122 32654	22nF 10% 63V
2518▲	4822 126 12944	47nF 10% 50V
2520▲	4822 126 12944	47nF 10% 50V
2522▲	4822 126 12944	47nF 10% 50V
2524	4822 126 13061	220nF 20% 25V
2525▲	4822 126 13838	100nF 20% 50V
2526▲	4822 126 12944	47nF 10% 50V
2528▲	4822 126 12944	47nF 10% 50V
2530▲	4822 126 12944	47nF 10% 50V
2533	4822 124 40849	330µF 20% 16V
2535▲	4822 126 12944	47nF 10% 50V
2536	4822 121 51244	330nF 5% 50V
2538	4822 126 13482	470nF 20% 16V
2540	4822 126 13482	470nF 20% 16V
2542	4822 126 13482	470nF 20% 16V
2544	4822 124 22466	1µF 20% 50V
2546	4822 124 22466	1µF 20% 50V
2560▲	4822 124 81021	100µF 20% 16V
2561▲	4822 126 13838	100nF 20% 50V
2562▲	5322 122 34123	1nF 10% 50V
2580	4822 124 41596	22µF 20% 50V
2581▲	5322 122 32654	22nF 10% 63V
2582▲	4822 126 12944	47nF 10% 50V
2583▲	5322 122 32654	22nF 10% 63V
2584▲	5322 122 32654	22nF 10% 63V
2591▲	5322 122 32654	22nF 10% 63V
2592▲	5322 122 32654	22nF 10% 63V
2650	4822 124 41545	220µF 20% 16V
2652	4822 122 33128	15nF 10% 63V
2654	4822 122 33128	15nF 10% 63V
2656▲	4822 122 33342	33nF 10% 63V
2658▲	4822 122 33342	33nF 10% 63V
2660	4822 122 32646	5.6nF 10% 50V
2661	4822 126 10525	8.2nF 10% 63V
2662	4822 122 32646	5.6nF 10% 50V
2665	4822 126 10525	8.2nF 10% 63V
2666	5322 122 31865	1.5nF 10% 63V
2668	5322 122 31865	1.5nF 10% 63V
2671▲	5322 122 34123	1nF 10% 50V
2672	4822 124 40763	2.2µF 100V
2673▲	5322 122 34123	1nF 10% 50V
2674	4822 124 40763	2.2µF 100V
2675	4822 124 41596	22µF 20% 50V
2676▲	4822 126 13838	100nF 20% 50V
2678	4822 126 13482	470nF 20% 16V
2680	4822 126 13482	470nF 20% 16V
2682	4822 126 13482	470nF 20% 16V
2684	4822 126 13482	470nF 20% 16V
2700▲	4822 126 13838	100nF 20% 50V
2702▲	5322 122 34123	1nF 10% 50V
2704▲	4822 126 13838	100nF 20% 50V
2706▲	5322 122 34123	1nF 10% 50V
2708▲	4822 124 81021	100µF 20% 16V
2710	5322 122 34098	10nF 10% 63V
2712▲	4822 124 81021	100µF 20% 16V
2714▲	4822 124 81021	100µF 20% 16V
2718▲	4822 124 81021	100µF 20% 16V

▭

3001	4822 117 11148	56k 1% 0.1W
3002	4822 117 11137	68k 1% 0.1W
3003	4822 117 11538	470Ω 1% 0.1W
3004	4822 117 11538	470Ω 1% 0.1W
3005	4822 117 11538	470Ω 1% 0.1W
3006▲	4822 051 20101	100Ω 5% 0.1W
3010	4822 051 20331	330Ω 5% 0.1W
3010	4822 051 20471	470Ω 5% 0.1W
3011	4822 117 11148	56k 1% 0.1W
3012	4822 117 11137	68k 1% 0.1W
3013	4822 117 11538	470Ω 1% 0.1W
3014	4822 117 11538	470Ω 1% 0.1W
3015	4822 117 11538	470Ω 1% 0.1W
3021▲	4822 051 20101	100Ω 5% 0.1W
3026▲	4822 051 20102	1k 5% 0.1W
3030▲	4822 051 20101	100Ω 5% 0.1W
3036▲	4822 051 20102	1k 5% 0.1W
3184▲	4822 051 20101	100Ω 5% 0.1W
3185▲	4822 051 20101	100Ω 5% 0.1W
3186▲	4822 051 20101	100Ω 5% 0.1W
3200	4822 117 11503	220Ω 1% 0.1W
3201	4822 051 20182	1k8 5% 0.1W
3202	4822 051 20182	1k8 5% 0.1W
3203▲	4822 051 20102	1k 5% 0.1W
3204▲	4822 051 20102	1k 5% 0.1W
3205	4822 051 20104	100k 5% 0.1W
3206▲	4822 051 20101	100Ω 5% 0.1W
3207▲	4822 051 20102	1k 5% 0.1W
3208▲	4822 051 20101	100Ω 5% 0.1W
3209▲	4822 051 20101	100Ω 5% 0.1W
3210	4822 117 11503	220Ω 1% 0.1W
3210	4822 051 20008	0Ω 5% 0.1W
3211▲	4822 051 20102	1k 5% 0.1W
3212	4822 117 11451	27k 1% 0.1W
3213▲	4822 051 20102	1k 5% 0.1W
3214▲	4822 051 20153	15k 5% 0.1W
3215	4822 117 11449	2k2 1% 0.1W
3216▲	4822 117 11846	10k 5% 0.1W
3217	4822 051 20562	5k6 5% 0.1W
3219▲	4822 051 20472	4k7 5% 0.1W
3220▲	4822 051 20472	4k7 5% 0.1W
3221	4822 051 20182	1k8 5% 0.1W
3222	4822 051 20182	1k8 5% 0.1W
3225	4822 117 10834	47k 1% 0.1W
3226	4822 117 10834	47k 1% 0.1W
3227	4822 051 20223	22k 5% 0.1W
3228	4822 051 20223	22k 5% 0.1W
3229	4822 051 20471	470Ω 5% 0.1W
3230▲	4822 051 20102	1k 5% 0.1W
3231▲	4822 051 20102	1k 5% 0.1W
3232▲	4822 051 20102	1k 5% 0.1W
3233	4822 051 20471	470Ω 5% 0.1W
3234▲	4822 051 20102	1k 5% 0.1W
3235▲	4822 051 20102	1k 5% 0.1W
3236▲	4822 051 20102	1k 5% 0.1W
3237▲	4822 051 20102	1k 5% 0.1W
3238▲	4822 051 20102	1k 5% 0.1W
3239▲	4822 051 20102	1k 5% 0.1W
3240	4822 050 11002	1k 1% 0.4W
3241▲	4822 117 11846	10k 5% 0.1W
3242▲	4822 051 20102	1k 5% 0.1W
3243▲	4822 051 20102	1k 5% 0.1W
3244▲	4822 051 20102	1k 5% 0.1W
3245▲	4822 051 20102	1k 5% 0.1W
3246▲	4822 051 20102	1k 5% 0.1W
3247▲	4822 051 20102	1k 5% 0.1W
3248▲	4822 051 20102	1k 5% 0.1W
3250	4822 117 11503	220Ω 1% 0.1W
3251	4822 117 11503	220Ω 1% 0.1W
3252	4822 117 11503	220Ω 1% 0.1W
3300▲	4822 052 10159	15Ω 5% 0.33W
3302▲	4822 052 10478	4Ω7 5% 0.33W
3303	4822 051 20474	470k 5% 0.1W
3304	4822 117 11507	6k8 1% 0.1W
3305	4822 051 20223	22k 5% 0.1W
3306▲	4822 117 11846	10k 5% 0.1W
3307▲	4822 051 20472	4k7 5% 0.1W
3308	4822 051 20122	1k2 5% 0.1W
3336▲	4822 117 11846	10k 5% 0.1W
3337	4822 051 20822	8k2 5% 0.1W
3338▲	4822 117 11846	10k 5% 0.1W
3339	4822 051 20822	8k2 5% 0.1W
3340▲	4822 117 11846	10k 5% 0.1W
3344	4822 117 11447	1k2 1% 0.1W
3347	4822 117 11447	1k2 1% 0.1W
3350	4822 051 20104	100k 55 0.1W
3351▲	4822 051 20102	1k 5% 0.1W
3352▲	4822 051 20472	4k7 5% 0.1W
3353▲	4822 051 20008	0Ω 5% 0.1W
3354	4822 117 10507	24k 1% 0.1W
3356	4822 051 20393	39k 5% 0.1W
3358	4822 117 10353	150Ω 1% 0.1W
3358	4822 051 20471	470Ω 5% 0.1W
3359	4822 117 10353	150Ω 1% 0.1W
3360	4822 051 20474	470k 5% 0.1W
3361	4822 100 12221	2k2 20% 0.1W
3362	4822 051 20122	1k2 5% 0.1W
3363	4822 051 20333	33k 5% 0.1W
3364▲	4822 051 20101	100Ω 5% 0.1W
3365	4822 117 10353	150Ω 1% 0.1W
3366▲	4822 051 20101	100Ω 5% 0.1W
3367	4822 117 10353	150Ω 1% 0.1W
3370	4822 051 20104	100k 55 0.1W
3373▲	4822 051 20008	0Ω 5% 0.1W
3374	4822 051 20104	100k 55 0.1W
3375	4822 117 11846	10k 55 0.1W
3376	4822 117 11585	75k 1% 0.1W
3380▲	4822 051 20101	100Ω 5% 0.1W
3381▲	4822 052 10109	10Ω 5% 0.33W
3390▲	4822 117 11846	10k 5% 0.1W
3391▲	4822 051 20101	100Ω 5% 0.1W
3469	4822 117 11503	220Ω 1% 0.1W
3471	4822 117 11503	220Ω 1% 0.1W
3472▲	4822 051 20008	0Ω 5% 0.1W
3503▲	4822 051 20101	100Ω 5% 0.1W
3508	4822 051 20331	330Ω 5% 0.1W
3510	4822 051 20331	330Ω 5% 0.1W
3518	4822 117 11449	2k2 1% 0.1W
3524▲	4822 051 20008	0Ω 5% 0.1W
3533▲	4822 051 20101	100Ω 5% 0.1W
3535▲	4822 052 10688	6Ω8 5% 0.33W
3540	4822 051 20829	82Ω 5% 0.1W
3542	4822 051 20829	82Ω 5% 0.1W
3544	4822 051 20829	82Ω 5% 0.1W
3546	4822 051 20471	470Ω 5% 0.1W
3548	4822 117 11503	220Ω 1% 0.1W
3549▲	4822 051 20102	1k 5% 0.1W
3550▲	4822 051 20101	100Ω 5% 0.1W
3551▲	4822 051 20102	1k 5% 0.1W
3552▲	4822 051 20008	0Ω 5% 0.1W
3554	4822 051 20122	1k2 5% 0.1W
3555▲	4822 051 20101	100Ω 5% 0.1W
3557▲	4822 051 20102	1k 5% 0.1W
3559	4822 051 20133	13k 5% 0.1W
3560▲	4822 052 10109	10Ω 5% 0.33W
3561▲	4822 051 20472	4k7 5% 0.1W
3562	4822 051 20822	8k2 5% 0.1W
3564	4822 117 11503	220Ω 1% 0.1W
3580▲	4822 052 10109	10Ω 5% 0.33W
3581▲	4822 051 20101	100Ω 5% 0.1W
3582▲	4822 051 20101	100Ω 5% 0.1W
3583▲	4822 051 20101	100Ω 5% 0.1W
3584	4822 117 11503	220Ω 1% 0.1W
3585	4822 117 11503	220Ω 1% 0.1W
3653	4822 117 10834	47k 1% 0.1W
3660	4822 051 20681	680Ω 5% 0.1W
3661	4822 051 20681	680Ω 5% 0.1W
3671	4822 051 20471	470Ω 5% 0.1W
3672▲	4822 117 11846	10k 5% 0.1W
3673	4822 051 20471	470Ω 5% 0.1W
3674▲	4822 117 11846	10k 5% 0.1W
3676▲	4822 052 10109	10Ω 5% 0.33W
3678▲	4822 051 20101	100Ω 5% 0.1W
3680▲	4822 051 20101	100Ω 5% 0.1W
3700	4822 051 20104	100k 5% 0.1W
3702▲	4822 117 11846	10k 5% 0.1W
3704	4822 051 20104	100k 5% 0.1W
3706▲	4822 117 11846	10k 5% 0.1W
3712▲	4822 052 10189	18Ω 5% 0.33W
3715	4822 051 20479	47Ω 5% 0.1W
3716▲	4822 051 20102	1k 5% 0.1W
3717	4822 051 20479	47Ω 5% 0.1W
3718▲	4822 051 20102	1k 5% 0.1W
3719▲	4822 117 11846	10k 5% 0.1W
3720	4822 117 10834	47k 1% 0.1W
3722	4822 117 10834	47k 1% 0.1W
3723▲	4822 117 11846	10k 5% 0.1W
3724▲	4822 117 11846	10k 5% 0.1W
3728	4822 117 10834	47k 1% 0.1W
3729	4822 117 11149	82k 1% 0.1W
3801	4822 051 20471	470Ω 5% 0.1W
3802	4822 051 20391	390Ω 5% 0.1W
3803	4822 051 20331	330Ω 5% 0.1W
3803	4822 051 20471	470Ω 5% 0.1W
3804▲	4822 051 20101	100Ω 5% 0.1W
3805▲	4822 051 20102	1k 5% 0.1W
3806	4822 051 20471	470Ω 5% 0.1W
3807▲	4822 051 20101	100Ω 5% 0.1W
3808	4822 117 11503	220Ω 1% 0.1W
3809	4822 051 20471	470Ω 5% 0.1W
3810	4822 117 11503	220Ω 1% 0.1W
3811▲	4822 051 20101	100Ω 5% 0.1W
3812	4822 051 20471	470Ω 5% 0.1W
3813▲	4822 051 20101	100Ω 5% 0.1W
3814▲	4822 051 20008	0Ω 5% 0.1W
3817▲	4822 051 20008	0Ω 5% 0.1W
3820▲	4822 052 10398	3Ω9 5% 0.33W
3822	4822 051 20122	1k2 5% 0.1W
4xxx	4822 051 20008	0Ω 5% 0.1W

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5002	4822 157 71646	5.6µH 20%
5200	4822 157 51216	5.6µH 10%
5202	4822 157 51216	5.6µH 10%
5225▲	4822 157 51462	10µH 10%
5229	4822 157 63635	10µH 20%
5230	4822 157 63635	10µH 20%
5232▲	4822 157 51462	10µH 10%
5301▲	4822 157 52285	6.8µH 10%
5306	4822 152 20667	5.6µH 10%
5312	4822 157 53634	5.6µH 10%
5350▲	4822 157 51462	10µH 10%
5351▲	4822 157 51462	10µH 10%
5352▲	4822 157 51462	10µH 10%
5378	4822 157 51216	5.6µH 10%
5380	4822 157 51216	5.6µH 10%
5381	4822 157 51216	5.6µH 10%
5387	4822 152 20667	5.6µH 10%

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6218▲	4822 130 34173	BZX79-B5V6
6219▲	4822 130 34173	BZX79-B5V6
6220	4822 130 83902	TZM-C5V6
6221▲	4822 130 34173	BZX79-B5V6
6222▲	4822 130 34173	BZX79-B5V6
6223	4822 130 83902	TZM-C5V6
6224▲	4822 130 34173	BZX79-B5V6
6225▲	4822 130 34173	BZX79-B5V6
6226▲	4822 130 34173	BZX79-B5V6
6227	4822 130 83902	TZM-C5V6
6228	4822 130 83902	TZM-C5V6
6229▲	4822 130 34173	BZX79-B5V6
6230▲	4822 130 34173	BZX79-B5V6
6231▲	4822 130 34173	BZX79-B5V6
6232▲	4822 130 34173	BZX79-B5V6
6233	4822 130 80125	BZX84-C5V6
6234▲	4822 130 34173	BZX79-B5V6
6235▲	4822 130 34173	BZX79-B5V6
6236▲	4822 130 34173	BZX79-B5V6
6237▲	4822 130 34173	BZX79-B5V6
6238▲	4822 130 34173	BZX79-B5V6
6239▲	4822 130 34173	BZX79-B5V6
6240▲	4822 130 34173	BZX79-B5V6
6241	4822 130 80125	BZX84-C5V6
6242	4822 130 83902	TZM-C5V6
6243▲	4822 130 34173	BZX79-B5V6
6304	4822 130 80542	BZX84-C33
6354	5322 130 34331	BAV70
6422	4822 130 30862	BZX79-B9V1
6546	5322 130 33671	BZX84-C6V2
6550▲	5322 130 34331	BAV70
6653▲	5322 130 31928	BAS16

⊗ ▭

7003	4822 209 90364	XN5601
7005	4822 209 90364	XN5601
7105	5322 130 41983	BC858B
7110	4822 209 90364	XN5601
7111▲	5322 130 41982	BC848B
7120	5322 130 41983	BC858B
7129	5322 130 44647	BC368
7177	4822 209 90287	TDA9170/N1
7188	5322 130 41983	BC858B
7200	4822 209 90032	P90CE201AEB/02
7202	4822 209 16107	Software 48PP91-03 -/05/12
7202	4822 209 16108	Software 48PP91-03 -/58
7202	4822 209 16122	Software 48" P/M

Spare parts list / Stükliste / Liste des pièces

7202	4822 209 16123	Software 54" P/M
7202	4822 209 16124	Software 54" -/77
7204	5322 209 11306	HEF4094BT
7205▲	5322 130 41982	BC848B
7206	4822 209 90022	HY62256ALJ-70
7208▲	5322 130 41982	BC848B
7212	4822 209 33251	ST24C16CB6
7213	5322 209 11306	HEF4094BT
7214▲	5322 130 41982	BC848B
7215	5322 130 42136	BC848C
7216	5322 130 42136	BC848C
7217	5322 130 42136	BC848C
7228	5322 130 42136	BC848C
7306▲	5322 130 41982	BC848B
7336▲	5322 130 41982	BC848B
7337▲	5322 130 41982	BC848B
7338▲	5322 130 41982	BC848B
7350	4822 209 12998	SAA4961/V2/S1
7351	5322 130 41983	BC858B
7352	4822 209 90365	TDA9161A/N1
7354	4822 130 10215	XN6212
7355	4822 130 10215	XN6212
7358	4822 209 12635	TDA4665/V4
7365	4822 130 42513	BC858C
7500	4822 209 90035	TDA4780/V3
7518▲	4822 209 73852	PMBT2369
7550	5322 130 42136	BC848C
7560▲	4822 209 90051	TDA8601/C1
7561▲	4822 209 73852	PMBT2369
7562	4822 209 90364	XN5601
7580	4822 209 15116	TDA9177/N1
7584▲	5322 130 41982	BC848B
7650	4822 209 33293	TDA9860/V2
7710	5322 209 83002	TDA2822M
7715	5322 130 42136	BC848C
7718	5322 130 42136	BC848C
7719	4822 130 42513	BC858C
7720	5322 130 42136	BC848C
7722	5322 130 42136	BC848C
7723	5322 130 42136	BC848C
7724	5322 130 42136	BC848C

TXT

Various

	5322 255 40677	IC socket 68P
	4822 265 51384	15P male 1,25
1031	4822 212 11112	TXT panel East eur
1031	4822 212 10823	TXT panel west eur

⊣⊢

2430▲	4822 126 10002	100nF 20% 25V
2433	5322 122 32658	22pF 5% 50V
2434	4822 122 31772	47pF 2% 63V
2435	5322 122 32658	22pF 5% 50V
2436	5322 122 32658	22pF 5% 50V
2437	5322 122 32658	22pF 5% 50V
2438	5322 122 32452	47pF 5% 63V
2440	5322 122 32531	100pF 5% 50V
2441	5322 122 32658	22pF 5% 50V
2442	5322 122 32658	22pF 5% 50V
2443▲	4822 126 10002	100nF 20% 25V
2444▲	4822 126 10002	100nF 20% 25V
2445	4822 122 32482	22pF 2% 63V
2446▲	5322 122 34123	1nF 10% 50V
2447	5322 122 31866	6.8nF 10% 63V
2448▲	4822 126 10002	100nF 20% 25V
2449▲	4822 126 10002	100nF 20% 25V
2451▲	4822 126 10002	100nF 20% 25V
2452▲	4822 126 10002	100nF 20% 25V
2453▲	4822 126 10002	100nF 20% 25V
2454	4822 124 41643	100µF 20% 16V
2455	4822 124 41643	100µF 20% 16V
2459	4822 124 41643	100µF 20% 16V
2461▲	4822 126 10002	100nF 20% 25V
2462▲	4822 126 10002	100nF 20% 25V
2463▲	5322 122 34123	1nF 10% 50V
2464▲	4822 126 10002	100nF 20% 25V
2465	5322 122 32658	22pF 5% 50V
2466	4822 122 33575	220pF 5% 50V
2467	4822 126 10326	180pF 5% 63V
2468▲	4822 126 10002	100nF 20% 25V
2469▲	4822 126 10002	100nF 20% 25V
2470	4822 122 33575	220pF 5% 50V
2472▲	4822 126 10002	100nF 20% 25V

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3148▲	4822 052 10279	27Ω 5% 0.33W
3149	4822 051 20474	470k 5% 0.1W
3151	4822 051 20302	3k 5% 0.1W
3152	4822 051 20471	470Ω 5% 0.1W
3153	4822 117 10833	10k 1% 0.1W
3154	4822 117 10833	10k 1% 0.1W
3155▲	4822 051 20472	4k7 5% 0.1W
3156	4822 051 20223	22k 5% 0.1W
3451	4822 051 20273	27k 5% 0.1W
3454	4822 117 11503	220Ω 1% 0.1W
3455	4822 117 10353	150Ω 1% 0.1W
3457	4822 117 10353	150Ω 1% 0.1W
3461	4822 051 10102	1k 2% 0.25W
3462	4822 051 20272	2k7 5% 0.1W
3463▲	4822 051 20101	100Ω 5% 0.1W
3464	4822 117 11503	220Ω 1% 0.1W
3465	4822 051 20339	33Ω 5% 0.1W
3481▲	4822 051 20101	100Ω 5% 0.1W
3482▲	4822 051 20101	100Ω 5% 0.1W
3483▲	4822 051 20472	4k7 5% 0.1W
3484▲	4822 051 20101	100Ω 5% 0.1W
3488	4822 117 11373	100Ω 1% 0.1W
3489	4822 117 11373	100Ω 1% 0.1W
3490	4822 117 11373	100Ω 1% 0.1W
3491▲	4822 051 20101	100Ω 5% 0.1W
3493▲	4822 051 20101	100Ω 5% 0.1W
3495▲	4822 051 20101	100Ω 5% 0.1W
3497	4822 117 10353	150Ω 1% 0.1W
3999	4822 051 20279	27Ω 5% 0.1W

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5451	4822 157 53634	5.6µH 10%
5452	4822 157 53634	5.6µH 10%
5454	4822 157 53634	5.6µH 10%
5455	4822 157 51216	5.6µH 10%
5460	4822 157 71464	Coil

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6001	5322 130 80119	BBY40
6002▲	4822 130 30621	1N4148

⊗ ▭

7049	4822 209 72042	L78L05ACZ
7050	4822 209 33465	74HCT4046AD
7051	4822 209 13642	SAA5270WP/B/M4
7051	4822 209 15087	SAA5270WP/E/M-4A
7055	4822 130 42131	BF550
7056▲	5322 130 41982	BC848B
7057▲	5322 130 41982	BC848B
7490	4822 209 90027	HYB514400BJ-70